

NATION'S BUSINESS

AUGUST • 1942





WE ARE THE UNSEEN

*We are the unseen, ever watchful, never sleeping,
Binding the atoms together.*

*Not ours the glory nor applause,
We wear no uniform and yet are part of our land's destiny,
Guarding her secrets well.*

We are the unseen, loyal, true to an ideal,

One God, one country, one flag:

We want no praise, knowing, out there,

Men have shed their blood that we might live . . .

With others soon to follow them.

*Our reward shall be, one day, with the touch of magic
at our finger-tips*

To send across the quivering wires

One far-flung cry — "Ours is the Victory!"

ELEANORA DAYTON SURRY

Long Distance Operator, Washington, D. C.

BELL TELEPHONE SYSTEM . . . LONG DISTANCE HELPS UNITE THE NATION





It's the patriotic gesture now!

RECOGNIZE THESE FOLKS? They're the people next door, and your friends up the street.

They're here to remind you that riding around with empty seats is a peacetime luxury. And this is war! Sure . . . you've heard "this is war" a thousand times. But do you really *know* what it means? It means *more* than sugar and gas rationing.

Do you know that even our Army is finding ways to do its job with less rubber? Do you know that combat tires are being reduced in rubber content to the very minimum?

Makes you think a little, doesn't it? Makes you ashamed of scuffing away what little we have left, by speeding, swerving corners, slamming brakes, and needless trips. Makes you *want* to fill those extra seats . . . or thumb a ride yourself!

And don't kid yourself into thinking this thing is temporary! Or that synthetic rubber is going to take care of you.

Over two years ago we at B. F. Goodrich were *first* to sell tires made with synthetic rubber to the American public. Because of this leadership, we know as much about synthetic rubber as anyone else in the country. And *we're* walking, or taking buses, or doubling up—right here in Akron.

It's *true* hundreds of people and companies bought our synthetic rubber tires. It's *true* the performance of these tires under all sorts of road and driving conditions all over the country proved them equal to those of natural rubber.

But that doesn't add up to tires for you

—or for us. Not while our Army and our Navy are short of rubber! Not while our armed forces need every ounce of crude rubber that can be obtained—every pound of synthetic that can be produced.

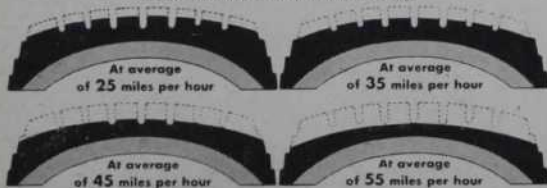
This war is different . . . we're *all* in it. And the sooner we all know it, the better. We expect to be selling you Silvertown Tires again. We intend to keep them the best on the road.

But right now there's a bigger job to do. We're not going to shirk it, and we know you're not!

IMPORTANT! America right now needs scrap rubber of all kinds . . . your old tires, old rubbers, old boots. Turn them over to the scrap collection agencies.

HOW SPEED WEARS OUT YOUR TIRES

DOTTED LINES SHOW RELATIVE AMOUNT OF RUBBER WORN OFF WITH ALL TIRES DRIVEN SAME DISTANCE



Write B. F. Goodrich, Dept. NB-8, Akron, O., for free 48-page booklet, "Will America Have to Jack Up Its 29,000,000 Automobiles?"



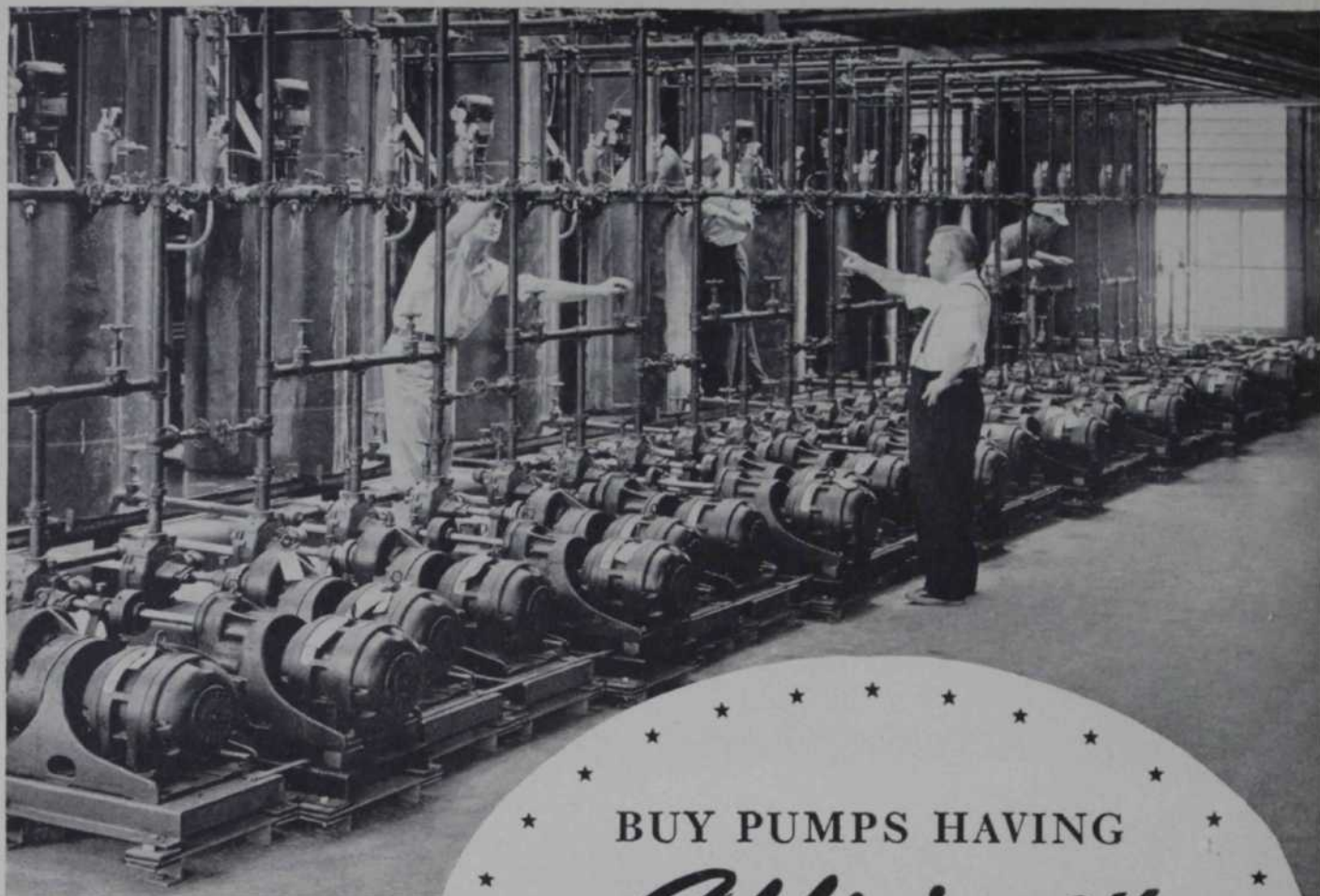
In war or peace

B.F. Goodrich

FIRST* IN RUBBER

*And first to offer American car owners tires made with synthetic rubber.





These 36 F-M motor-driven rotary pumps in a large manufacturer's paint mixing room serve distant paint spray booths.

BUY PUMPS HAVING

Efficiency

*That's More Than
Skin Deep!*

THOSE pumps you are about to buy for war production—will they serve you efficiently not only now but also through the years to come?

They will if you choose Fairbanks-Morse Pumps. For these pumps have mechanical superiority which per-

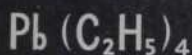
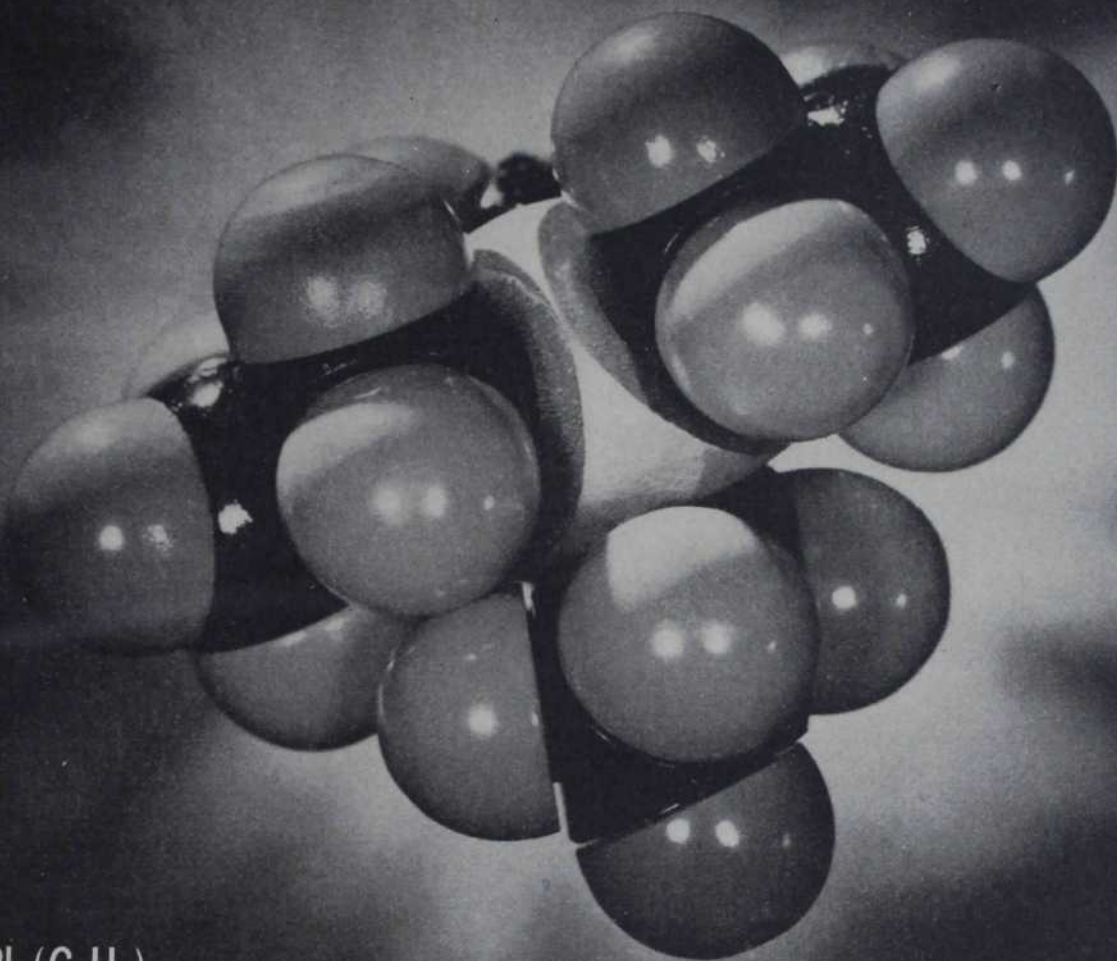
mits them to retain their efficiency long after less highly engineered pumps begin to waste power.

So use your priority to buy pumps for today with an eye for tomorrow. Fairbanks, Morse & Co., 600 South Michigan Ave., Chicago, Illinois.

FAIRBANKS-MORSE



**PUMPS
DIESELS
MOTORS
SCALES**



Nobody knows how this works

...BUT IT DOES A TERRIFIC JOB!

IT HELPS airplanes fly faster, farther and higher. It gives greater power to automobiles, trucks, buses and motorized military equipment. It even helps the farmer's tractor plow more acres per gallon of fuel.

It's one of the ingredients of Ethyl fluid—shown as a chemist's model of a molecule, 100 million times life size. Ethyl fluid, which is made by the Ethyl Corporation, is used by petroleum refiners to improve the antiknock quality (octane number) of aviation and motor gasolines.

Nobody knows exactly why Ethyl fluid raises the antiknock quality of gasoline... how a single molecule like the one in the

picture can control the combustion of nearly 100,000 molecules of fuel and air inside an engine. But this fluid does such a good job that more than two hundred oil refiners put it into their gasoline—into superior fuels produced through modern refining methods.

The result is an adequate supply of high-octane gasoline—the key to many of the tremendous increases in power and efficiency that have been made in engines for airplanes, automobiles, tractors and military equipment.

ETHYL CORPORATION
Chrysler Building, New York City



To Maintain Your Plant at Victory Efficiency

Repair with **INSULUX** Glass Block

It's Fireproof! It Saves Metal! It Insulates! Quick Delivery!

IT SELLS AT PRE-WAR PRICES!

Your plant must be maintained at top efficiency if you're going to "speed 'em for freedom"!

If your windows are worn out and need replacing, INSULUX Glass Block are the logical, economical material to use. They will serve you well during the war—and years after.

Glass Block daylight panels can be installed quickly by any mason, using ordinary equipment. *Little or no metal is needed*—a real aid to the war effort. Wood sash or louvres can be installed as part of the INSULUX

Glass Block panel for ventilation.

You'll get *better* light—well diffused, deep-reaching. Better insulation, too, which brings savings on heating and air-conditioning. Maintenance costs are very low.

INSULUX is available for *immediate delivery*. Prices are still at pre-war levels. Mail coupon below for new book showing how to use INSULUX in all types of openings. Owens-Illinois Glass Company, Dept. 66, INSULUX Products Division, Toledo, Ohio.

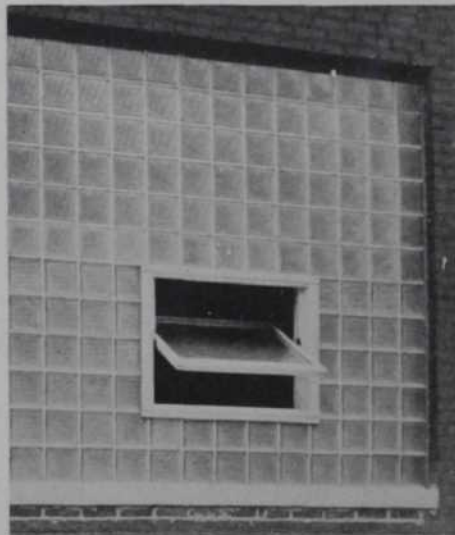
*See how easily
you can install
INSULUX daylight
panels with wood
sash ventilators*



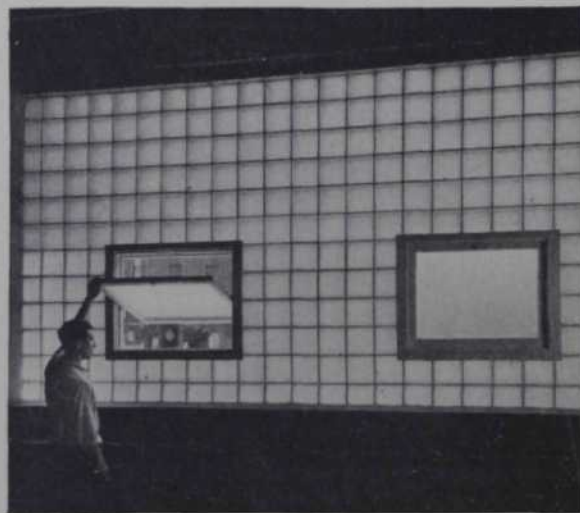
1 Opening is made ready for block by building chase in existing brick wall or with wood blocking (which could be replaced with steel after the war).



2 Wood windows are installed in this INSULUX panel to provide ventilation. They could be easily replaced with standard-size steel sash later—without disturbing the glass blocks.



3 The completed INSULUX panel, transmitting ample daylight through prismatic block, which direct light upwards without objectionable glare.



GET THIS TIMELY INSULUX BOOK

It gives full details on use of INSULUX Glass Block in old and new buildings with minimum metal in installation. Mail coupon for your free copy.



OWENS-ILLINOIS

INSULUX

GLASS BLOCK

OWENS-ILLINOIS GLASS COMPANY, Dept. 66
INSULUX Products Division, Ohio Bldg., Toledo, O.

Gentlemen: Please send, without obligation, free book "Alternate Construction Details" on use of INSULUX in old and new buildings with minimum metal.

Name

Address

City State

LARGEST IN THE BUSINESS FIELD
363,130 A.B.C.

NATION'S BUSINESS

**Chamber of Commerce of
the United States**

MERLE THORPE
Editor and Publisher

LAWRENCE F. HURLEY
Assistant Editor and Publisher

PAUL McCREA
Managing Editor

Associate Editors

R. L. VAN BOSKIRK

FRED DeARMOND

W. L. HAMMER

HERBERT COREY

LESTER DOUGLAS
Director of Art and Printing

CHARLES A. R. DUNN
Staff Artist

JOHN F. KELLEY
Assistant to the Editor and Publisher

ORSON ANGELL
Director of Advertising

J. H. BUCKLEY
Western Advertising Manager

DAVID V. STAHL
Eastern Circulation Manager

FLOYD C. ZEIGLER
Western Circulation Manager

GENERAL OFFICE—Washington, U. S. Chamber Building.

BRANCH OFFICES—New York, 420 Lexington Ave.; San Francisco, 333 Pine Street; Dallas, 1101 Commerce St.; Chicago, First National Bank Building; Atlanta, Chamber of Commerce Building; Canadian representative, 530 Board of Trade Building, Montreal, Quebec.

As the official magazine of the Chamber of Commerce of the United States this publication carries authoritative notices and articles in regard to the activities of the Chamber; in all other respects the Chamber cannot be responsible for the contents thereof or for the opinions of writers.

Although the editors will make every effort to return unsolicited manuscripts promptly and in good condition, Nation's Business cannot accept responsibility for loss or damage of this material.

Contents for AUGUST • 1942

	PAGE
Dear Mr. Business Man:	17
SENATOR WALTER F. GEORGE	
The chairman of the Senate Finance Committee discusses his job of raising \$25,000,000,000 in federal taxes without destroying the sources that yield revenue	
The Man Who Has Never Relaxed	19
JAMES B. BAMFORD	
Strength from War's Crucible	21
RICHARD L. JOHNSON	
An optimist looks at a few of war's compensations and sees the stimulation it gives to original thinking and adaptation to necessity	
Lend-Lease in War and Peace	24
O. K. ARMSTRONG	
Light on the most obscure and anomalous phase of the war effort. Is it "lend-lease" or gift? Will it end when the fighting stops? Is it confined to our military allies?	
Is He Lazy or a Genius?	27
DONCASTER G. HUMM	
A Full Abundance of Scarcity	30
R. L. VAN BOSKIRK	
"... Plainly Visible to the Shopper"	33
ELLEN NEWMAN	
Mechanized Farms Fight for America	35
BLISS ISELY	
Received—But Not Read	37
TOM JONES PARRY	
They Thanked Him for Coming	39
FRED B. BARTON	
Packaging Can Take It	48
JULIETTA K. ARTHUR	
Keep the Retail Doors Open	54
FRED DeARMOND	
REGULAR FEATURES:	
Through the Editor's Specs. 7	Washington and Your Business 43
The Promise of Free Enterprise 15	Management's Washington Letter 59
MERLE THORPE	
The Map of the Nation's Business 29	No Business Can Escape Change 70
FRANK GREENE	
VOLUME 30	
NUMBER 8	



SUPREMACY IS IN THE AIR!

In that great new eagle's nest of aviation... the Ford Aircraft Engine Plant... production is far ahead of schedule.

Engines...made with watchmaker's precision...are coming from assembly lines in heart-warming succession.

In explaining the secret of this record-making production, no small credit is given to air-control in the plant itself.

Day and night... 4000 tons of York refrigeration equipment maintain constant temperature

throughout the plant...help to step up production by reducing scrap loss on precision work. Raw materials...work in progress...tools...gauges maintain unvarying dimensions in even temperature. Expansion and contraction are not given a chance to cause faulty machining.

This is just one striking demonstration of air-control as a powerful ally in precision mass production.

York Ice Machinery Corporation,
York, Pennsylvania.

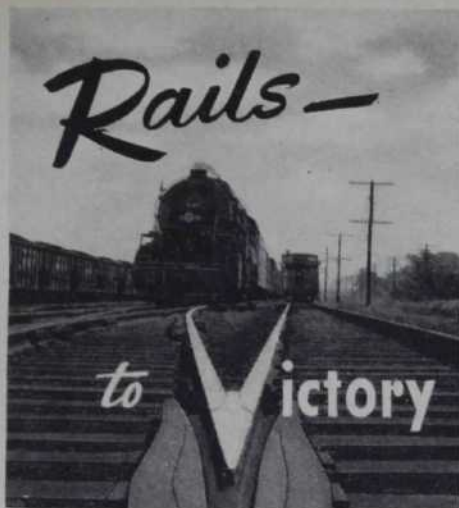


Released for publication by the United States Army



YORK REFRIGERATION AND AIR CONDITIONING

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885



Enemy No. 1 is having transportation troubles. He neglected his railroads. He could learn a lot from America.

He would learn what this nation knows: that mass railway transportation is vital to mass production and movement of war materials and mass movement of fighting men. He would learn that a vast network of 400,000 miles of steel rails crisscrosses and unites every part of this land. He would learn that over these rails, every hour of every day and night, is moving the greatest volume of the finest machines of war the world has ever known. He would learn something about the efficiency and coordination of the American railroads and the loyalty of their employees in performing the biggest transportation job in history.

Above all, he would learn that the power, the spirit and grim determination of America will win this war.



**Norfolk
and Western
Railway**

PRECISION TRANSPORTATION
CORP. 1942 N. & W. RY.

Through the Editor's Spect

O say, can you see?

WE HOPE you like our cover picture. We do. It may be nostalgia for the days, carefree and undirected, when the youngsters planned their own lives. This trio grew into the town's Silver Cornet Band. They met Thursday nights for practice in the barber shop, not because of the atmosphere of barber shop harmony but because it "closed up" earlier than the other stores. The band gave its members a chance to see the world, first, the neighboring towns, then adjoining county seats, playing at fairs, and then the big city with trolleys and printed menus at restaurants, the time the local band was invited to join in the Priests of Pallas parade.

Of course, the captious old-timer will find plenty wrong with the picture. He will point a finger of scorn at a snare drummer doing the directing and the unprofessional grip the budding Solo B \flat Cornet virtuoso has on his trumpet. But we shall contend that there is something truly American in the picture, a flavor, an aroma, a feeling, any way you look at it.

You can take your choice

ALONG with everybody else, including expectant mothers, clergymen, Sunday motorists and precinct committeemen, we magazine editors are receiving help from a thoughtful Government. Lately came a neat, six-page release from Dorothy Ducas of Archibald MacLeish's Office of Facts and Figures suggesting what we should publish for September and October.

One suggestion that caught our eye was that magazines run some fiction-with-a-purpose stressing the delights of living in Washington for girl stenographers and clerks who seem reluctant to come to the capital in sufficient numbers. But that idea turned a bit sour a few days later when we heard Archibald MacLeish, Miss Ducas' boss, talking over the air. To prove that he and other government officials are martyrs, Mr. MacLeish

spoke of Washington as "the most uncomfortable, overcrowded city in the United States . . . the worst climate on the continent."

We respectfully call this to the attention of Brother MacLeish's Co-ordinator of Official Public Utterances.

Made in America

REMEMBER "Lightnin'," a theater hit of some 20 years ago? Remember where that lovable braggart, Frank Bacon, boasted that he had driven a swarm of bees across the mountains in the dead of winter "an' never lost a bee"?

It remains for the Railway Express Agency to beat that record. In 1941 it carried 310 tons of live bees from 64 points in seven southern states to 13 states in the middle and northern sections of the United States and to several Canadian provinces.

Bees are shipped in colonies numbering 10,000 to 15,000, fed *en route* with sugar syrup. Express men are charged with the duty of giving bees air and lightly spraying them with cold water on hot days.

In the past two years the Express Agency made 30,237 shipments and collected \$96,341 for the service. The demand comes from orchardists seeking to assure pollenization of fruit blossoms and from honey producers who find it cheaper to replenish their stock with new bees than to maintain insects through the long cold season of the north.

This activity, which we didn't know about until just the other day, makes us respect still more the ingenuity and resourcefulness of the free-born American citizen.

Rewards for talent

THE S.E.C. reveals that Standard Brands, Inc., last year paid Edgar Bergen nearly four times as much as its president.

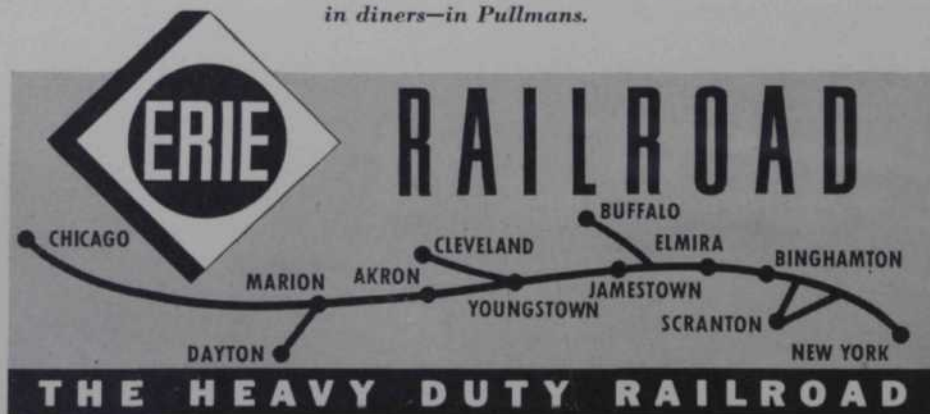
No one grudges Mr. Bergen and his alter ego, Charlie McCarthy, this handsome income of \$282,000, plus



The tanks are coming!

• Here's a warning to the Axis, a battle cry for freedom . . . "The tanks are coming!" And they're coming faster and faster. First by the carload, then by the trainload. An unending stream of metal monsters which will fight to preserve the American Way. Makes us feel good to have a part in speeding them on their journey. "The tanks are coming!"

If you must travel, take mid-week trains when traffic is lightest to avoid inconvenience. We'll do our best to give you the friendly, comfortable service you have had in the past—in coaches—in diners—in Pullmans.



what Bergen made in Hollywood and elsewhere. And it's quite proper that they shouldn't. The money was fairly earned. But what a looking askance and a muttering in the beard when a business executive is reported to have made that much!

Is the executive who creates or maintains jobs for 100,000 men, whose genius provides some necessity or conveniences to millions of his countrymen, and does it all without benefit of an appropriation, less creative than the artist? Are the responsibilities of the two to be compared? Then on what basis are their rewards to be judged?

Culling out "bad words"

THE wine industry has become semantically conscious. Its spokesman, the Wine Institute, is urging the trade to avoid the use of such words as "fortify," which erroneously connotes a high alcoholic content. "Manufacture" is frowned upon. Wine, being an organism, is "produced" or "grown," says the Institute. For this reason, "winery" or "wine cellar" sounds better than "plant." Wine is not a liquor, the Institute reminds its members, and there is no such thing as a "sour" wine.

Many an industry carries a heavy tonnage of liability in terminology that depicts it in a wrong light to the public. To paraphrase Confucius, "One wrong word may create 10,000 pictures—all bad ones."

"Give us men"

THE MOST strategic material is not rubber or tin or manganese, but able men. Men in the upper grades of ability as business executives.

This situation has always existed; now it is announced officially. We have the information that the Committee on Administrative Personnel of the U. S. Civil Service Commission is seeking experienced administrators "who can get things done," to take key positions in the war agencies of the Government. Those needed the most are executives who have had responsible experience in heavy industry, capable managers with experience handling personnel and labor relations, budgeting and fiscal affairs, purchasing, storage, warehousing, inventory control and foreign trade; also industrial consultants, management engineers and administrative analysts with ability to organize procedures and work methods. Salaries range from \$4,600 to \$8,000. In most cases, the right sort of men for these positions have been earning much more than that.

As a patriotic service, top-notch executives are asked to make their rec-

ords available to the Committee at Washington. It has been designated as the official body to assist all war agencies in locating the right executive at the right time.

This is recognition from the highest source that there is no substitute for executive brains and experience.

W.P.B. makes a discovery

THE War Production Board proposes to issue an inventory control order to retailers to keep them from anticipating too much in buying stocks. Which moves Lew Hahn, General Manager of the National Retail Dry Goods Association to say that W.P.B. is "Carrying coals to Newcastle." About as logical, one might say, as if retailers were to adjure government to take up social-political consciousness. Inventory control has long been almost a fetish with retailers.

Consumers can thank their stars that retailers and wholesalers were foresighted enough to stock up heavily before we entered the war. Their wisdom had the effect of stimulating production and making available more goods against what may prove a long period of scarcity.

Scotching a false analogy

OUR Cynical Visitor dropped in again the other day. He said:

There's a very dangerous idea running loose and I meet it often. It reasons thusly: If the nation can make this immense effort under the spur of war, and put everybody to work by the will of the republic expressed through its government, why can't it do the same thing with public works in peace time? Why should we ever have unemployment and depressions again? That's a very seductive analogy. You ought to answer it in NATION'S BUSINESS.

We reminded him that we've been answering that fallacy in every issue. If all of the \$214,000,000,000 so far appropriated by Congress to carry on this war is spent we will have a debt more than double the annual national income, or two-thirds of our estimated national wealth. Under the stress of war, the nation is consuming its capital—eating up its seed corn, if you will—at a terrific rate. We are all resolved to endure it for victory, but to make the same thing permanent would be akin to a city dweller with \$2,500 saved up, retiring from work and living on his savings while it lasted. Or a bear that tried to hibernate and live off his fat 12 months out of the year.

Through thick and thin

AT A TIME when all values are being challenged and nothing seems permanent, it is comforting to read that the Travelers Insurance Company has

**THE OLD BIKE
IS GOOD
AS EVER!**



**—MIGHT LAST
A CENTURY LIKE
CAST IRON PIPE!**

BICYCLES are rationed—hard to get. Cast iron pressure pipe—the kind that is used for underground mains—is also hard to get because of the requirements of direct and indirect war projects. But when peace comes, remember this fact, important to taxpayers: Cast iron pipe serves for centuries. Its *proved* useful life is at least double the *estimated* life of other pipe used for water, gas or sewer mains. Costly replacements that would be necessary with shorter-lived pipe are avoided by the use of cast iron pipe. It can be salvaged or re-used. It is the only ferrous metal pipe, practicable for underground mains which rust does not destroy.



Unretouched photograph of *more-than-century-old* cast iron pipe still serving and saving taxes in New York City.

Pipe bearing
this mark



is cast
iron pipe

Available in diameters from 1 1/4 to 84 inches.

**CAST
IRON
PIPE**

*No. 1
Tax Saver*

CAST IRON PIPE RESEARCH ASS'N, T. F. WOLFE, RESEARCH ENGINEER, PEOPLES GAS BLDG., CHICAGO



Bombers from the Bottom of the Deep Blue Sea

THERE'S a fabulous amount of magnesium in every cubic mile of sea water.

Enough magnesium for more than *four million* Flying Fortresses. Enough to lay a continuous ceiling of bombers . . . a hundred miles wide and stretching all the way from London to Berlin!

Now magnesium can't be dredged out of the ocean . . . for every ounce of this rare metal must be produced by electrolysis. This necessitates the conversion of vast amounts of alternating current to direct current, at the very water's edge.

The best means of converting power is the mercury arc rectifier. As long as ten years ago, Westinghouse Research Engineers began experimental work on a *new type* of mercury arc rectifier which would be more efficient . . . more economical . . . less costly to install and maintain than existing types.

These Westinghouse scientists realized that new untapped fields in metallurgy would be opened by

the perfection of an improved mercury arc rectifier. In 1937, they brought forth the *Westinghouse Ignitron*.

The Ignitron operates on the radically new principle of *starting* and *stopping* the mercury arc with each cycle. This means that electrodes can be placed much closer together . . . grids and shields reduced . . . arc drop voltage decreased . . . voltage control simplified . . . arc-back practically eliminated. And all of this assures higher efficiency and greater reliability.

More than 1,000,000 kw of Ignitrons are now at work in magnesium, aluminum and chlorine plants, in electric railway systems, in mines, in many war industries.

And so, the germ of an idea . . . born ten years ago in the Westinghouse Electronics Laboratories . . . is now contributing its important share in winning the war today.



Westinghouse

WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, PITTSBURGH, PENNSYLVANIA

just paid its 300th consecutive dividend. Since 1866, two years after its organization, the company has never missed a regular obligation to its stockholders.

End of one emergency

WHILE they're pinning medals on heroes of the month, we have some nominations to make. It's the managers for the House of Representatives who stood pat in conference with the Senate and refused to compromise on outright abolition of the Civilian Conservation Corps.

This is the first time, says Senator Byrd, that any agency of the federal Government has been abolished, in the face of Administration opposition, since the birth of the New Deal. It's a small but significant beginning toward economy in the federal civilian establishment. The only catch is the House concession to the Senate of \$8,000,000 to be spent by the Army in liquidating C.C.C. This is a reminder of the Railroad Valuation Bureau, which finally completed its work in 1934 but still lives on in skeleton form.

Define your term

HOW many times have you heard people say something to the effect that "transportation is in a bad way"? Of course what they mean today is that ocean shipping, for many reasons, is a problem child right now. There are many forms of transportation, but only ocean transportation is in trouble.

President J. L. Beven of the Illinois Central has called attention to this confusion in terms, and by so doing he performs a service for all forms of domestic transportation. Joseph B. Eastman, director of the Office of Defense Transportation, recently pointed out in an address that domestic transportation "has done promptly and well all that it has been called upon to do, including the movement to the ports of troops, armaments and munitions and of war products and lend-lease supplies of every description."

Let's keep the record straight.

"Don't quote me"

DISTURBING note: An increasing proportion of readers who write us add the postscript, "Don't use my name," "Don't quote me," "Not for publication," or similar adjuration. In some cases it is natural modesty, or timidity, or simply a precaution against a flock of letters to answer.

But most of these correspondents are inspired by fear. Fear of what?

They are business men, heads of

enterprises that depend for their very existence on "getting along" with government, on public good will and on amicable relations with their employees. Lately they have observed that all three of these conditions are controlled by the first. If a business man incurs the dislike of some influential government official he may find himself "in bad" with the public and with his employees as well as government. Free speech may bring either a crackdown or a smear from one of the array of controlling agencies. It is an unhealthy state of affairs. When it comes to business men, such coercion for others can't be far behind.

War is hell!

IN CANADA the war has dealt a fatal blow to the pioneer spirit. By decree of the Canadian Government it shall hereafter be illegal for women to divert flour sacks to domestic use, says *Modern Miller*.

To tell farm women that they may no longer make dish towels out of their flour sacks is to repress an elemental instinct of thrift, and we're glad we don't have the job of "telling 'em," say, out in Kansas.

Deploring Dorothy

DOROTHY Thompson is scolding again; this time it's Westbrook Pegler, whom she reads out of the American camp and into Hitler's because he wrote something about war aims that Dorothy didn't agree with.

Mr. Pegler is more than equal to taking care of himself in a verbal scrap. We don't need even to hold his coat. But we do have a nickel's worth to say in answer to Dorothy's current emotion that "not a single altogether unique idea has been born on American soil." What about these, just to mention the first that come to mind?

The system of checks and balances in the American Constitution.

Baseball.

Negro spirituals.

Corn whiskey.

Dunkin'.

Workers driving to their factory jobs in automobiles.

Typewriters.

Peruna.

Chitterlings.

Wanted: Tired salesmen

THE manager of a sales force of 200 men tells us his hiring technique has changed. He says:

I don't ask a man any more whether he can sell. I ask him whether he has four good tires. If he has, he gets the job.

THIS
Saboteur
HELPED MAKE
THIS RECORD
LAST YEAR

HEAT-FAG
WORK ACCIDENTS
14,000 DEATHS
1,400,000 INJURIES
Cost to Industry
\$700,000,000

HEAT-FAG, the unseen saboteur—the enemy of production—strikes at workers who sweat. In sweating, vitally needed salt is lost from men's bodies. They become inalert—fatigued—careless—make mistakes. Lowered efficiency sets in—costly accidents can easily happen. And, priceless man-hours are lost.

AVOID HEAT-FAG—USE
MORTON'S
SALT TABLETS
This is how a Morton Salt Tablet looks when magnified. Quick dissolving (less than 30 seconds).
Case of 9000 10-grain salt tablets **\$2.60**
Salt-Dextrose Tablets, case of 9000 **\$3.15**
Morton's Dispensers 500-tablet size - **\$3.25**
1000-tablet size - **\$4.00**
ORDER NOW
Order from your distributor—or directly from this advertisement.



FREE Sample Tube

Write—on your firm letterhead—for a pocket size sample tube of Morton's Salt Tablets and for the new folder—"Heat-Fag and Accidents Ride Together."

MORTON SALT CO., Chicago, Illinois

EVERYONE WHO SWEATS NEEDS SALT



"General Electric MAZDA fluorescent lamps are Made to Stay Brighter Longer!"

"What makes you so sure?"

"They're checked and double-checked all the time. G-E MAZDA F lamps are subjected to hundreds of tests and inspections covering all important defects."

"By whom?"

"By a nationally known independent electrical testing laboratory as well as by experienced G-E inspectors."

"How many lamps are tested? Two or three thousand?"

"Nearly one million lamps every year . . . and remember, these tests are in addition to those made by G-E in its own factories."



This inspection makes sure each G-E lamp lights up . . . has correct voltage drop . . . uniform coating—and that marking and color agree.



When this girl presses the button, the tube goes bump! To pass this "bump" test, the lamps must remain undamaged . . . a definite check on sturdiness.



These MAZDA Service inspectors check lamp length, tube diameter and contact-pin alignment. That proves accurate fit. (They check 50 other points, too).



She checks the life of G-E lamps burning continuously and in "off-on" operation; checks light output efficiency; proves they Stay Brighter Longer.



Filtered "electric eyes" give a precision check on G-E MAZDA F lamp color; help assure good color uniformity.

To give users of G-E MAZDA Fluorescent lamps more and still more light for their money, these lamps are constantly being improved. For example, they now give you . . .

Longer life . . . Thanks to several G-E improvements: 1. A newly perfected method of treating cathodes; 2. Better phosphors; 3. More accurate gas pressure control.

Maximum light for current consumed . . . G-E improvements in phosphor powders and more exacting control have steadily improved light output and efficiency.

Less premature end-blackening . . . Any fluorescent lamp blackens slightly toward the end of life. But a year-old G-E process of treating cathodes practically eliminates occasional early end-blackening.

Greater color uniformity . . . This important G-E

feature results from special "filtered electric eye" control of color.

Quicker, more uniform starting . . . Because the argon gas pressure in every G-E MAZDA fluorescent lamp is rigidly controlled.

Better performance in service . . . Trouble-causing impurities are eliminated by a G-E gas-cleansing operation and other exacting methods.

Smoother light . . . Measured thickness of G-E phosphor coating assures high uniformity in light output and in appearance.

Lower and lower cost . . . Automatic machines developed by G-E control injection of mercury into lamps safely, *within exacting limits*. This is only one of many G-E manufacturing and research developments which have brought better lamps and lower prices.

G-E MAZDA LAMPS

GENERAL ELECTRIC

MAZDA—not the name of a thing but the mark of a research service



UNRETOUCHED PHOTOGRAPH:

25-Year Kreolite Wood Block Veteran



Reprinted From A
Jennison-Wright Advertisement
in THE SATURDAY EVENING POST, August 9, 1919.

"The Plant of the Owens Bottle Company at Charleston, W. Va., furnishes another excellent example of the remarkable qualities of these floors.

"Under varying conditions of heat, cold, and heavy wear, they have stood the test. In 1917, this company constructed a complete new plant at this point.

"The floor problems of this plant, devoted to the manufacture of bottles, are both difficult and vital to the success of the industry. Part of the floors are subjected to blistering heat. The floors are laid within 18" of the melting pots..."

Unretouched photograph of wood block recently taken from heavy traffic lane of floor, laid in 1917, for Owens-Illinois Glass Co. plant at Charleston, W. Va. (formerly Owens Bottle Co.)

Specify **KREOLITE... accept no substitute**

This block, part of a Kreolite floor laid in 1917, has already delivered 25 years of constant, dependable performance.

Though subjected to terrific abuse, the floor shows no signs of deterioration; protects the feet of those who tend the glass furnaces; is now on the job 24 hours a day, speeding production of glass containers.

For war production, Kreolite Wood Blocks offer timely advantages: coordination with building schedules... installation with no interruption to production by Jennison-Wright crews who have laid thousands of factory floors.

They can "take it" too. These tough blocks—cross-cut from Southern pine—can be relied upon for many years of service. They do not decay or weather—since they are thoroughly air-dried and impregnated with Kreolite Oil.

Kreolite Wood Blocks are ready to speed your war jobs. Let us know your 1942 flooring requirements today.

THE JENNISON-WRIGHT CORPORATION
TOLEDO, OHIO

23 Nation-Wide Offices

KREOLITE RAILROAD SWITCH & INDUSTRIAL TRACK TIES • PILING • BRIDGE • DOCK • LUMBER

HOW WOOD BLOCKS SPEED WAR PRODUCTION



- 1 Comfortable to Work Over
- 2 Dustless—Easy to Clean
- 3 Absorb Noise—Cut Down Vibration
- 4 Protect Dropped Tools and Parts
- 5 Insulate Against Heat and Cold
- 6 Spark-proof, Skid-proof, Safe*
- 7 Good for Trucking Aisles
- 8 Lowest Maintenance Cost
- 9 Quick to Install—Easy to Replace
- 10 A Firm Foundation for Machines
- 11 Durable—Stand Up Under Abuse
- 12 Provide for Conduits and Cables

*A Kreolite Wood Block Floor is cleaner and safer (because skid-proof) when given a final coating of Kreolite Jennite, our new exclusive final filler and finish.

KREOLITE WOOD BLOCK FLOORS

ONE OF A SERIES OF INFORMATIVE TALKS ON A CRITICAL MATERIAL



What is **SYNTHETIC RUBBER**?

THE chemist will tell you that synthetic rubber is not rubber at all. It is made from organic materials having in themselves none of the characteristics of rubber.

There are several types of synthetic rubber. They can be derived from coal, grain alcohol, acetylene, petroleum, natural gas and other hydrocarbons by a wide variety of chemical processes.

Goodyear is familiar with all these processes. Its first patent on artificial rubber manufacture dates from 1927. This was preceded by several years of preliminary research. Since that time it has striven to produce a synthetic that would equal or improve upon the best properties of natural rubber and have none of its weaknesses.

From this beginning more than fifteen years ago Goodyear developed Chemigum.

This is a petroleum-base synthetic. We have been producing it in limited quantities during the past four years for

a wide number of commercial purposes.

In workaday use Chemigum has now a number of advantages and some drawbacks. It can be made superior to rubber in resistance to wear and abrasion—or to the disintegrating action of oil and gasoline. It excels natural rubber in resisting oxidation and it can be compounded so it remains flexible at sub-zero temperatures.

On the other hand, Chemigum is not as elastic nor as adhesive as rubber. At high temperatures it suffers a temporary reduction in toughness. It is more difficult to process; its cost is as yet relatively high.

These limitations are not insurmountable. Under the pressures of war Goodyear is advancing and enlarging new and wonder-working manufacturing facilities in cooperation with the government program. Within another year these should simplify mass production—and greatly lower costs.



THE GREATEST NAME IN RUBBER
GOOD YEAR

Chemigum—T. M. The Goodyear Tire & Rubber Company

The Promise of Free Enterprise

THERE are those today who claim that by ordering each citizen's affairs, Washington can assure a better living for everyone everywhere, and produce "the coming century of the common man."

On the other hand, great philosophers like Spengler and Ortega see nothing but chaos in turning over to the common man the reins of society. They say he cannot plan for himself, much less for his fellows, has no stomach for responsibility, and takes no thought of, nor makes provision for, tomorrow.

Business men disagree with both the pessimists and lyrical well-wishers. They have been jockeyed into the false and ironical position that they have no concern for the under-privileged. But, by word and action, they have proved their faith in the common, ordinary, garden variety of mankind.

A business man, however, is forced to consider "existing facts which stand in the way of desirable ends." He believes that free enterprise holds the greatest promise for the individual and the future.

Robert Hunter, in his illuminating work, "Revolution," sums up the results of the two forms of society in terms of living standards of the common man. Eight countries with less natural resources but with capitalism and a *representative* democracy over-top by ten times the well-being of the individual in those countries with State domination of industry and various forms of autocracy.

The United States, standing midway between unchecked democracy and autocracy, leads the pack. Mr. Hunter concludes:

Capitalism is a product of the freedom, thrift and hard labor of multitudes and their standards of living cannot be improved when they are the habitual victims of the interference and depredations of a despotic State. If a planned economy administered by a bureaucracy could produce and distribute wealth profusely the people in the autocracies would have been the richest in the world.

Business men who come to Washington are invariably disturbed by statements of those in authority that bureaucratic domination of industry and commerce must continue during the "reconstruction period." They note with mis-

giving that, whereas most of the control legislation of the last war carried explicit provision for termination of war authorities, every such proposal today has been defeated.

Coupled with this they note the increasing number of post-war plans, none of which includes, much less gives emphasis to, the necessity for a "profit and loss system," for the incentives that bring genuine competition between managerial talents, between workmen with varying capacities for advancement, and, in sum, for the American principle of individual reward for individual merit.

There is hope. The people are getting a taste of State control of their affairs. At war they gladly relinquish their freedom to buy and to sell; to decide for how much they shall work, and where and when and how; to count that day unusual that does not bring from Washington a new regulation of their once private affairs. They won't tolerate such control when peace comes. They see little difference between such a life and the authoritarian way they are sending their sons to fight against. Those sons, too, will have ideas about this when they return.

What exultation of the spirit, what bounding forward in purposeful action, would result if some of our national planners would recall the principles of free enterprise upon which the new Republic was launched 160 years ago! A great student has summed them up:

Our rulers can best promote the improvement of the nation by strictly confining themselves to their legitimate duties, by leaving capital to find its most lucrative course, commodities their fair price, industry and intelligence their natural reward, idleness and folly their natural punishment, by maintaining peace, by defending property, by diminishing the price of law, and by observing strict economy in every department of State.

There is a platform which gives great promise, and adherence to it will in very truth give us the leadership which will make possible a century of the common man.

Merec Thorne



"If the shippers and consumers of this coal want to help win the war, they will ship and buy and stock all the coal possible in the spring and summer months." JOSEPH B. EASTMAN, Director, Office of Defense Transportation.

"A full coal bin is the best possible insurance anybody can have against a wartime coal shortage." H. A. GRAY, Acting Director, Office of Solid Fuels Coordination for War, HAROLD L. ICKES, Coordinator.

"To produce and transport the tremendous quantity of oil required for war, we need, and will continue to need, the ever greater efforts and cooperation of every individual." HAROLD L. ICKES, Secretary of the Interior and Petroleum Coordinator for War.

IT takes a lot of transportation to keep America's plants supplied with the ore, chemicals, and other necessities for the machines of war.

And there is still another urgent demand — FUEL — for power and heat.

So to the railroads' record volume of war-time freight is added the emergency carrying of coal and oil.

Today the railroads are hauling about 750,000 barrels of oil a day into the East—more than 50 times the amount they are usually called upon to carry.

Production of bituminous and anthracite coal, most of which moves by rail, has been stepped up to nearly 12½ million tons a week.

How these records have been made is a story of splendid cooperation. Shippers are loading cars fuller and faster, and releasing them quicker.

And they are cooperating, too, by anticipating their coal needs — another way to help keep the war program on the move — to help keep our homes warmer this winter.

ASSOCIATION OF
AMERICAN



RAILROADS

WASHINGTON, D. C.

Dear Mr. Business Man:

LAST month we printed a letter in which a business man gave Congress his views as to a sound tax program. Here is a reply by Senator Walter F. George, Georgia, Chairman, Senate Finance Committee

YOU ARE rightfully concerned over the pending tax bill, the largest tax measure ever formulated in the history of this country.

A fact that has not been generally realized in the long process of writing this bill is that it is not just a question of raising some \$8,000,000,000 as the Treasury proposes, or of some \$6,000,000,000 as the House bill provides, but of bringing the total federal revenues, new and old, to \$25,000,000,000 or \$27,000,000,000.

In other words, Congress is charged with imposing an additional six or eight billions upon a tax structure that last year was raised to an unprecedented level. Naturally this is a long process. I am hopeful that final passage of the bill will have been completed by October 15. There has been a lot of criticism over delay in passing it. Business men, it has been pointed out, have been held in suspense as to how to arrange their affairs. Undoubtedly this is true. But I submit we are confronted with a tremendous problem and that haste is not necessarily a virtue.

As I understand it, business is concerned chiefly with two things:

First, how to maintain sufficient working capital to meet emergencies and for conversion back to peace production when the war is over.

Second, how to keep earnings at a level which will prove attractive to private investors and keep the profit motive working.

So far as these questions can be dealt with in the pending tax bill, I believe there are three methods which offer relief.

First, I am hopeful that we can provide that a certain percentage of in-



MORYDCZAK

Capital, like people, works best when encouraged by fair treatment and good wages. When it works . . .

**Jobs are plentiful, pay rolls expand, wages are good.
Taxes are only one of the factors that influence investment**

EWING GALLOWAY



comes, maybe 20 per cent, may be allowed as a deduction, invested in non-interest bearing, non-transferable government bonds, payable after the war. This would provide a nest egg for post-war conversion and production.

Second, I am strongly in favor of permitting tax deductions to encourage debt retirement. This could be accomplished by permitting both corporations and individuals to deduct from their taxable income limited percentages of the amounts representing payment of obligations incurred prior to January 1, 1942. This would encourage them to get their slate clean for the peace.

Third, there are many important administrative changes, too complicated and technical to discuss here, which I am hopeful will be made in the pending bill. These will give relief to business enterprises in connection with the hazards of war-time expansion and reorganizations.

But tax provisions are only one phase of the problem which American business faces. The power to tax is the power to destroy, true enough, but

other powers of destruction are equally potent. And these other powers are what you business men should be more concerned about.

For example, suppose there were no taxes on profits at all. It would remain that your freedom to produce, your freedom of initiative, your freedom of enterprise, your freedom of employment, your freedom to obtain raw materials, are definitely controlled. Doesn't this offer more of a problem than taxes?

Manifestly, certain controls are necessary during the war. Private enterprise has lost its meaning for the duration. What should be your concern, my concern, everybody's concern, is the removal of these controls after the war.

I have not the slightest doubt that, after this war, there will be investment money aplenty. There will be money which wants to make money. This is the substance of private enterprise. There is no serious move to take away capital in the pending tax bill. It only takes away profits.

But the flow of investment money will be determined by the profit oppor-

tunity. That relates to an attitude of the Government in power and it has no relation to the tax bill upon which we are now working. I say this, because I am afraid that too many of you are prone to think about your future in terms of the pending tax bill, instead of the broader aspect. Your future, the future of private enterprise in this country, will not be determined primarily by the tax bill. It will be determined by the attitude of the Government in power, whatever that Government may be. This means that it will be determined by the thinking of the American people. This means you and the rest of us.

We will agree that one of the dangers to private enterprise, to our economy, is inflation. I am convinced that the greatest single deterrent against inflation, which is one of the two lights in which the present tax bill is being written, is PRODUCTION. Production—for civilian needs—I believe is more of a prevention against inflation than price ceilings. If there is sufficient production to meet civilian needs, those who are

(Continued on page 90)



Rationing and heavy taxation are two ways by which inflation may be checked. A better is increased production of consumer goods so buyers need not bid against each other

EWING GALLOWAY



The church, the school and fire department owe their existence to some George with a penchant for community improvement

The Man Who Has Never Relaxed

By JAMES B. BAMFORD

SAY "Hello" to George.

George is an American tradition. He's one of the things we are fighting for, and not the least important. He's a public benefactor and a town nuisance. George is the man we let do things. Some people think he's the Vanishing American. Some hope he is.

George was the community chest campaign chairman last year. He was commander of the Legion post. George ran the every-member church canvass. He thought that would help his insurance business. You've heard about George, of course. He sprained his ankle when the Widow Smith's hen coop caught fire. He's a member of the volunteer fire company.

Even before December 7, George went to a meeting every night. His children knew him as that man who was always called from the dinner table to answer the telephone. His wife once said, in a moment of despair, that she envied her girl friends who had married

IS CITIZENSHIP to be stuffed and put under glass or will the men we have always "let do it" rally today as they have rallied since Lexington?

drunkards. At least their husbands were brought home once in a while.

Little credit for his work

GEORGE, too, sometimes wonders why he doesn't relax. It is true that a little of this public service would help his business, but he passed that limit long ago. Certainly, he gets little credit for his multiple activities. Although the chamber of commerce is markedly better since he accepted the presidency, all he hears is criticism. Although the church mortgage has been paid off after a bitter struggle, most of the congregation still seem convinced that the bank would never have foreclosed anyway. And he surely lost friends when

he tried to put through that annexation plan for the boroughs in the metropolitan area.

When the war came along, George, naturally, became chairman of the civilian defense council. After seven months of work he is weary, but there remain rural sections of the county to be organized. George will finish the job.

"Somebody has to organize these damn townships."

George, and all the other Georges in every city and hamlet, have one of the finest backgrounds in American history. George Washington may have been in people's minds when they said, in the early days of the Republic, "Let George do it!" He had established his interest in civic affairs in his home

state by boosting the Potomac Canal. George Clinton helped with the part he played in founding King's College (Columbia). George B. Smith, a member of Engine Co. No. 12, installed the first fire hydrant in New York City at his own expense. George Wythe freed his slaves and supported them until they could care for themselves. George Clymer helped start the Pennsylvania Agricultural Society. And George Ross refused a gift of plate worth £150, proffered by fellow townsmen in recognition of his public services. He said that it was every man's duty to contribute to his country's welfare.

He developed fire departments

SOMETIMES the name was Aaron or Zacharia. There were Georgians too, whose names were anything from Abigail to Zenobia.

The one thing that all these people have had in common has been their recurrent urge to motivate and implement their respective village improvement societies. Almost every fire com-

pany today owes its early start to some George who headed a committee to buy an engine for quenching fire. Police development was aided by George who always responded to the hue and cry when the town marshal set forth in pursuit of the fleeing miscreant.

Our educational system is built upon the subscription school that George started. That early school building was built on land he donated with logs he and his neighbors cut. It was heated with the product of the wood-cutting bee of which he was patron.

Georgiana rallied the womenfolk for cooking, whether it was at a barn-raising or during siege time in the stockade. It was she who supervised the gathering of petticoats for the making of bandages; who bossed the pouring of lead for the early bullets.

George was patron and chairman of the committee who organized the Asylum for Friendless Children. He was active in starting the Society for the Amelioration of the Conditions of the Poor, and helped mightily in organizing the hospital.

He organized the board of trade and was chairman of the committee that encouraged legislation permitting the establishment of the commission form of government. Later, another George organized the chamber of commerce and was chairman of the citizens' committee that encouraged legislation permitting the city manager form of government.

Georgiana organized the woman's club, was chairman of the committee that pioneered in the development of municipal playgrounds and brought home from a convention the idea for the parent-teacher association.

Organized progress

MORE than any other single factor, George and Georgiana—and the tradition of a free people that made their work possible—have made this country what it is. There remains a distance to travel, but we have come far, and George and his wife have attended every meeting that has brought progress.

How does the George of 1942 stand in comparison with the men who went to town meetings long ago? How does George's leadership in unselfishly promoting a modern airport for his town compare with that of the civic committee that first rode on horseback over the rough country they hoped would become the site of the Erie Canal? Is George slipping? Is the job of civic leadership more difficult than it used to be when a model town could always be built just over the horizon on the shallow graves of dead Indians?

Or is it just that George should be stuffed and put behind glass in the museum, now that the Government has taken over?

People are the same

THE tools of George's craft, the people with whom he lives, are no worse than they ever were. The 1942 citizen may be physically softer than his New England ancestor, but he can read and write. He is less contentious, more malleable, more conditioned to improvement, more imaginative. He is just as willing to participate disinterestedly in a move for civic betterment as his stubborn ancestor.

George Washington, on December 30, 1788, at one of the blackest moments of the Revolution, thus characterized his fellow workers:

If I were called upon to draw a picture of the times and of men from what I have seen, heard, and in part know, I should say in one word that idleness, dissipation, and extravagance seem to have laid fast hold of most of them; that speculation, speculation, and an insatiable thirst for riches seem to have got the better part of every other consideration and almost of every order of men; that party disputes and per-

(Continued on page 70)



Public benefactor and town nuisance, George took on civilian defense as he took on earlier chores: "Somebody has to do it"

Strength from War's Crucible

By RICHARD L. JOHNSON

NATIONAL Chamber President, Eric A. Johnston, in the July NATION'S BUSINESS, named six elements available to us after the war which, wisely used, promise to provide full employment "When the Boys Come Home."

These elements are great increases in plant capacity, skilled workers, raw materials, economic wants here and abroad and savings. Richard L. Johnson, formerly Economist of the Northern Trust Company of Chicago, now with a large aircraft company, enlarges and particularizes.—The Editor.

IS WAR all waste and destruction? Must the nation's ordeal be written off as total loss?

These are not academic questions. They invite practical appraisals of situations and prospects. Fundamental to any consideration is the fact that periods of adversity, sacrifice, hardship, and strain can properly be regarded as private and public benefactors in the most realistic sense.

For the individual, such periods restore habits of thrift and frugality, resourcefulness, ingenuity. They develop many essentials of character, and help him regain his sense of values. For a firm or company, difficult days encourage new efficiency, new methods and products, and the reconsideration of policies and practices.

It is unfortunate, perhaps, but, with human nature what it is, a prolonged period of prosperity and uninterrupted success is enervating and dangerous. The ultimate fate of the Roman and Spanish Empires, and the recent history of many of our own industries and firms demonstrate this rather trite but often forgotten observation.

NATION'S BUSINESS for August, 1942



Tremendous growth of the chemical, automobile, farm machinery, petroleum and related industries was an aftermath of the first World War

Were depressions, particularly the most recent one, allowed to run their course, many of the self-correctives of adversity would automatically develop. Labor would work harder, improve its efficiency. Management would redesign products, discard obsolete appendages. The entire economy would orient itself to a more workable and flexible level.

We fight readjustments

BUT human nature refuses to let depressions run their course. Thus it prevents the generation of adjustments and correctives.

The "relief measures" of the past

decade were undertaken in the effort to avoid the natural consequences of depression. As a result, through the W.P.A., C.C.C., N.Y.A., A.A.A., wage-hour legislation, individuals were subsidized. Saving, learning a skill, readjusting habits, working longer hours were discouraged.

Many companies and entire industries were likewise lulled along by the spending of these mass subsidies; the easing of reorganization and bankruptcy laws; loans from the R.F.C.; minimum or price-fixing legislation; the N.R.A. and related supports. In view of the prevalence of subsidizing feather-beds during the 1930's and the equally softening successes of the

1920's, it may be questioned whether there was much fundamental progress or basic development, either in individuals or our business structure during the two decades after the first World War.

A review of the record for the period 1914-1918 shows that, in virtually every line of industry, trade, and other business, the World War influenced the widespread adoption of major advances and revolutionary developments. For example, the successful application of intelligence and aptitude tests to the armed forces stimulated large-scale acceptance of similar rational personnel policies by industry. Development of workable methods employed in the field of business statistics and research can be traced in large measure to Colonel Ayres' efforts in the War Department.

Better records

THE upward revision and enforcement of income taxes to finance the war forced business firms to keep records and become acquainted with accounting.

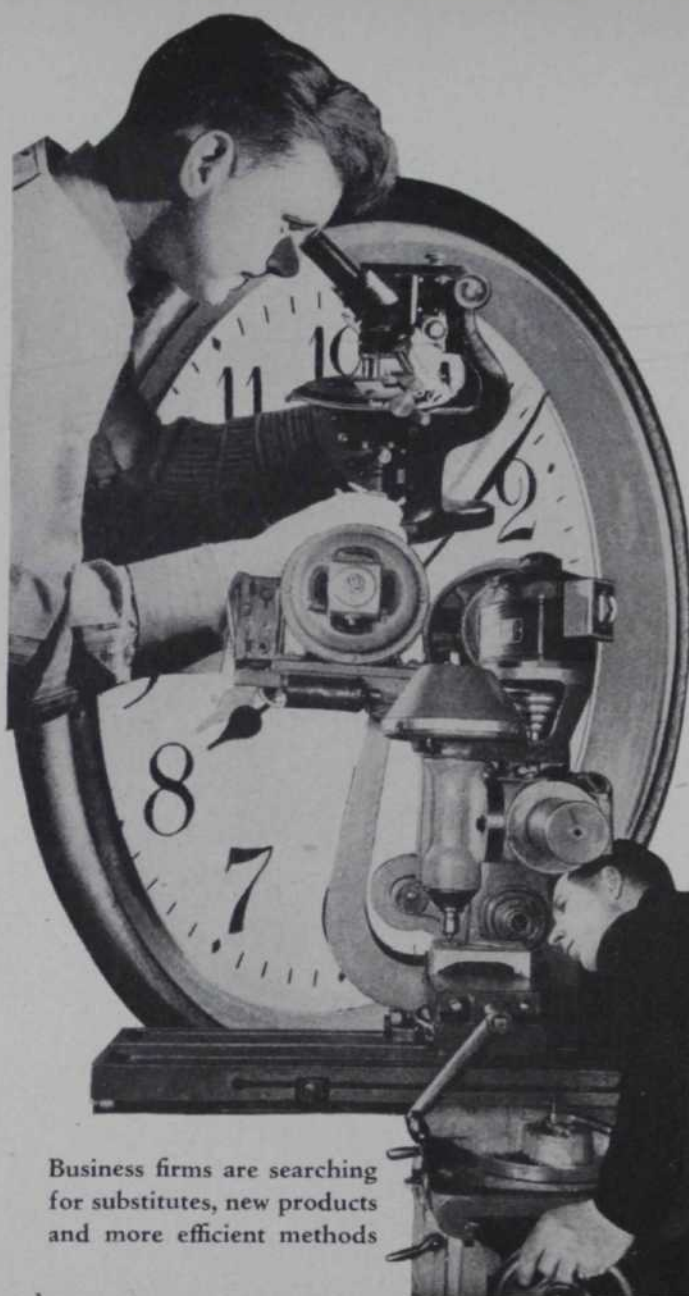
In the field of finance, people generally were unacquainted with any type of security, stock or bond, until they were compelled, in effect, to buy Liberty Bonds from the Government.

Throughout manufacture and production, the innovations and advances—waste salvage and recovery, standardization and simplification, line and mass assembly—established after 1914—are now common practices. Most of our present chemical, electrical, and engineering research laboratories grew to respectable proportions in the rush to meet the requirements of the war effort.

Inquiry into almost any other industry or product would reveal many more instances of the revolutionary effects of the last war impact.

The two decades after the war were primarily periods in which the developments of the war years were adapted, refined, and extended. The tremendous growths of the chemical, automobile, farm machinery, petroleum, and related industries were a part of this process. The new production, personnel, and research techniques were applied to the older lines of manufacture and trade.

In many cases, the lessons of the war era were carried to undesirable ex-



Business firms are searching for substitutes, new products and more efficient methods

tremes. Forgetting the temporary and abnormal character of much of their war-time demands, many industries continued to expand to levels too large for sustained peace-time operations. For the most part, however, business trends during the 20 years before the present war began consisted largely of elaborations or variations in respect to the pattern originating in the urgencies of the 1914-1918 period.

Evidences of change

IT IS far too early to ascertain or appraise all of the consequences that may issue from the current war. Too often, trends, innovations, or eras can be recognized only in retrospect. But even now, evidences of significant change are accumulating.

Once again, individuals are becoming acquainted with the virtues of saving, if only to pay their income taxes;

the fetish of shorter hours is losing some of its former flavor; labor is taking an active interest in technical training. Evidence of the latter may be seen in the thousands of trainees throughout our factories and workshops, the growing numbers of men and women, young and old, attending classes on a 24-hour basis in the expanding trade and technical schools in every industrial area.

Business firms are likewise reconsidering some of their policies, searching for substitutes, new products, more efficient methods, and looking farther ahead.

In fact, many of the "hardships" we would not accept in the previous depression are being forced upon us in the name of the war emergency.

Better work

MORE tangible results are becoming apparent in specific industries. Underlying the pronounced expansion in aircraft manufacture—monthly horsepower output now exceeds the peak annual production prior to 1939—is a mass of technical miracles. Weight of aircraft motors per horsepower has been reduced to new low levels—near one pound per horsepower—a small fraction of the best weight ratios hitherto attained in internal combustion engines.

The time required for many foundry and machining operations has been cut 50 per cent to 75 per cent or

more from former requirements. Practical facility for working with new low tolerances and new highs of quality, dependability, and performance have been attained on mass-production bases. In their principles of layout, intraplant communication, and construction, the new aircraft facilities have established new standards for the future.

In the shipbuilding industry, stagnant since its last war boom, a fertile testing-ground has been provided for new ideas in fabrication—arc welding and its companion, shot welding. Providing stronger, lighter, and simpler products, these new welding processes are largely credited with today's record-breaking pace of ship construction. Indeed, throughout the field of metal working, steel, copper, magnesium, nickel, aluminum, manganese, and their alloys are being put to new uses, new tests, new standards. No less spectacu-

lar are the revolutionary advances in synthetic rubber, high-octane motor fuels, plastics, and scores of other products.

Post-war promises

WHAT are the post-war implications of all these rapid developments? Experience shows that they will tend to gain momentum, not only during the war but afterward. American industry after this war will possess the greatest production capacity in its history. When the facts can be made known, the increased facilities that will have been added to our mining, metal working, motor, machinery, and other industries will stagger the imagination. We will have supplies of raw materials, natural and synthetic, exceeding all previous records. Combine these enlarged plants and abundant materials with the mounting numbers of skilled men and women being trained in industrial "know how," and the foundation is laid for inestimable possibilities.

Probably the imagination is most stirred by projecting the future of the aircraft industry, now that it has attained mass-production proportions on models that were still on the drafting boards a few months ago. The actual accomplishments of the Air Force Ferrying Command within a short time, carrying thousands of tons of armaments and supplies to every continent on the globe, leave little doubt that "freight trains" of the air are not an idle dream—they are here. Although there were less than 100 first-class airports in this country at the year's beginning, there will be several thousand by the end of the war, together with their repair and storage hangars, runways, radio facilities, and service personnel.

The automobile industry rose to prominence shortly after the last war, despite the lack of, and in advance of, highways, service stations, garages, and other requirements. May not the forced, prior provision of airports and facilities, to say nothing of the hundreds of thousands of war-trained pilots and mechanics, result in an even speedier peace-time progress in com-

mercial and private aviation? It is logical to expect that, by the end of this war, the materials, methods, standards, and products of the aircraft industry will have made every automobile now on the road, and every motor plant now in existence, as obsolete as the Ford Model T is now.

One need not remain in the stratosphere to discover some other highly promising possibilities. It is reasonable to assert that, owing to the experience of welding in shipbuilding, heavy engineering construction time will be shortened, costs cut, and quality improved. In residential and other light building, pre-fabrication and mass-production were bandied about on an experimental basis during most of the past decade. It remained for this war, mushrooming the demands for low-cost, quickly available residences, barracks, and warehouses, in military and industrial areas, to provide a practical opportunity for mass-produced, pre-fabricated building to demonstrate its real worth. It has done so in a manner and to an extent that suggests these new concepts of housing will occupy an important position in the post-war surge of private and public construction.

More material, new techniques

AVAILABLE supplies of magnesium, aluminum, and other light metals, together with welding and new alloy techniques, will likely revolutionize the forms of automobiles, refrigerators, and similar durable goods. Measured by the standards of products available at the end of the war, large numbers of homes will be rated unhealthy, inefficient, uneconomical, inconvenient, and dangerous. With the productive capacities then on call, the various metals and alloys, the plastics, the synthetics, together with the older materials, domestic and foreign, will be accessible in quantities and at prices that can scarcely fail to provide strong stimulation to all markets, old and new.

There is scarcely an industry or company that will not have an imposing array of new products or services—flexible glass, flame-proof and water-

proof fabrics, frequency-modulation and television radios, plywoods, dehydrated and quick-frozen foods, powerful light-weight motors, high-speed air-conditioned transportation—to offer the masses, here and abroad, upon the resumption of open markets and free choice in purchases.

The question naturally arises: "Who is going to use all these new products and materials, and who is going to be able to buy them?"

It must not be forgotten that man's wants and consumptive abilities are unlimited.

With the possible exception of his stomach, all his other desires and longings are insatiable. That is, economic expansion has not been a matter of this material displacing that one, this new product rising at the expense of an older one, but rather an aggregate increase in the total volume of all goods produced and consumed.

Accumulated demands, markets

THE growth of the chemical industry is just one example of an entirely new line of products being absorbed with little or no displacement of existing goods.

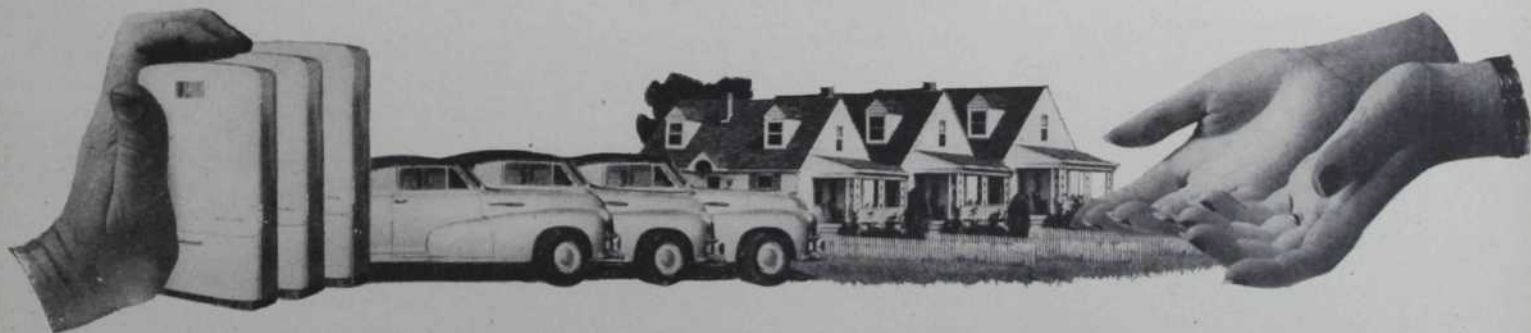
In transportation, the ton- and passenger-miles of trucks, automobiles and airlines far exceed those lost by the railroads. These new forms of transport, new chemicals, radios, have signified additions to our aggregate wants and needs.

A sustained, uninterrupted period of rising or large national income is not an absolute requirement, moreover, to expansion in new industries and products.

The decade of the 1930's was not exactly prosperous or tranquil, yet new records of production and consumption were set in many lines, including chemicals, motor trucks, tractors, cigarettes, radios, refrigerators, shoes, textiles and glass containers.

Prolonged recession or depression is not an inevitable consequence of the war, however. To the contrary, there are several compelling reasons for expecting a pronounced economic ad-

(Continued on page 91)



Peace will find a substantial backlog of business caused by deferred buying of refrigerators, residential construction and non-armament industrial goods

Lend-Lease in War and

By O. K. ARMSTRONG



ACME



BLACK STAR



DEM PHOTO

WAR COSTS

Lend-lease goods fall into three categories: Military items, industrial materials, agricultural commodities. Fighting equipment will equal about 60 per cent of the total in six months

Tanks like this one being unloaded in the Middle East might be returned, if not lost in action, to help form a reservoir of defense materials for future use

Sugar by the shipload for foreign consumption obviously cannot be returned. Agricultural aid to the Allies now makes up 22 per cent of lend-lease

Army shirts make up a good sized portion of the textiles that are being used to help clothe foreign armies and civilian population

Spent ammunition, wrecked airplanes, sunken ships, eaten food, worn clothing, are gone for good. No one is asking or expecting that they will be paid for in any other way than Victory

THE Lend-Lease Act, passed March 11, 1941, after a stormy congressional debate, began functioning a few days later with an appropriation of \$7,000,000,000 for the initial effort to aid any nation whose defense the President deemed vital to the defense of the United States. Since that time, the project has become the most stupendous and far-reaching ever authorized by the parliament of any government.

Lend-lease aid now flows to 36 nations. It is recognized as the chief weapon to bring victory over the Axis powers, and it looms as a major factor in shaping economic policies after the war is over.

What's the balance sheet on lend-lease? What money has been pledged, and how much more may be needed? How is the act administered? Will there be repayment of any kind? How will lend-lease function in post-war reconstruction?

All the sums being spent are contributions from the industry and thrift of the American people. Every pledge for future use of our resources in war or peace is an obligation to be met out of the productiveness of our nation. The people are entitled to a full accounting of the lend-lease program, and full information as to plans for its continued use, subject only to the limitations necessary to guard military secrets.

Certain it is that the act created a device of economic and political power immeasurable by any past standard. Its purpose is to aid nations resisting aggression. In his initial discussion of the project, President Roosevelt cited the example of what we would do if a neighbor's house caught fire. We'd lend our garden hose and, after the fire, the neighbor would return it, he said. For some time, newspaper men in Washington referred to this historic piece of legislation as "the garden hose."

That conception has changed. It's understood now that the garden hose will not be returned and that the water used in putting out the fire of Nazi conquest is a gift. Furthermore, we know that our neighbors who have lost their houses are already looking to us to

Peace

supply the money and resources to build them again. An official of the Lend-Lease Administration has expressed it in these words:

The American government feels that insistence on repayment in cash or in goods for American aid to Britain, China, Russia and other United Nations would only lead to a repetition of the defaults and dislocations of trade that marked the first World War indebtedness.

For a nation to be eligible for lend-lease aid only one thing is necessary: the President's declaration that the defense of that nation is vital to the defense of the United States. As of mid-June, the lend-lease list includes all the British Commonwealth as one nation. Of the others, 28 have declared war upon one or more of the nations which are now our enemies. Those receiving aid in this hemisphere are: Canada, Mexico, Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

Many receive aid

EASTERN hemisphere nations receiving aid are: Belgium (free), British Commonwealth, China, Czechoslovakia, Egypt, France (free), Greece, Iceland, Netherlands, Norway, Poland, Russia, Turkey and Yugoslavia.

Obviously, most of these old-world countries are victims of aggression. China's fight against Japanese aggression has been going on for five years. Aid to Turkey is frankly an insurance paid for her neutrality and later assistance to the United Nations. Conspicuously absent are the Baltic states, Finland, Latvia, Estonia and Lithuania.

Now for the figures already involved: To the first appropriation was quickly added \$11,410,000,000 making a total of \$18,410,000,000 appropriated directly to the President for lend-lease. Then came Pearl Harbor. By June 1, appropriations to the War and Navy Departments and to the Maritime Commission—authorized for transfer to

PEACE SALVAGE

Much lend-lease money is equipping airplane factories, landing fields, building sugar refineries, setting up manufacturing plants, to help sustain the economy of the nations to which we lend

American machine tools like the one shown above are being set up in Australia to make more tools for armament. Will they be converted to peace-time pursuits after the war has been won?

Mechanical goods in never-ending shiploads is unloaded at a base in the Middle East—some of it will undoubtedly find permanent abode in some of the lands of Mohammed

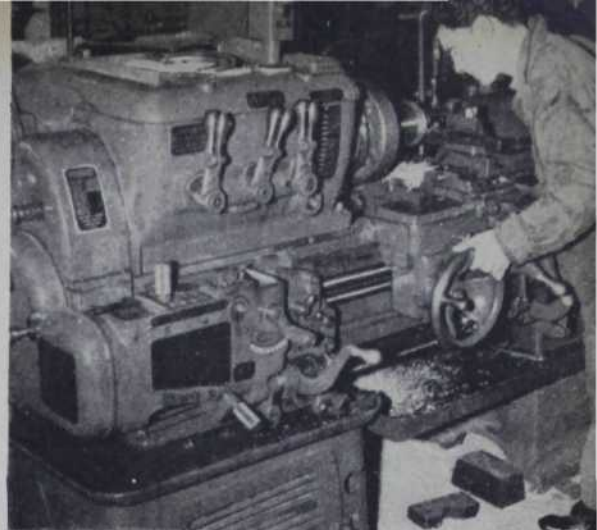
Railroad equipment from spikes to locomotives is being installed by Uncle Sam to improve transportation in foreign deserts

Items like the above will increase the industrial wealth of nations who may become future competitors

lend-lease—added \$31,834,650,000. At this rate, the total available will be \$100,000,000,000 by the end of 1942.

Lend-lease spokesmen do not like to carry the matter further into the future but point out that a "long war" would throw all present calculations into the wastebasket.

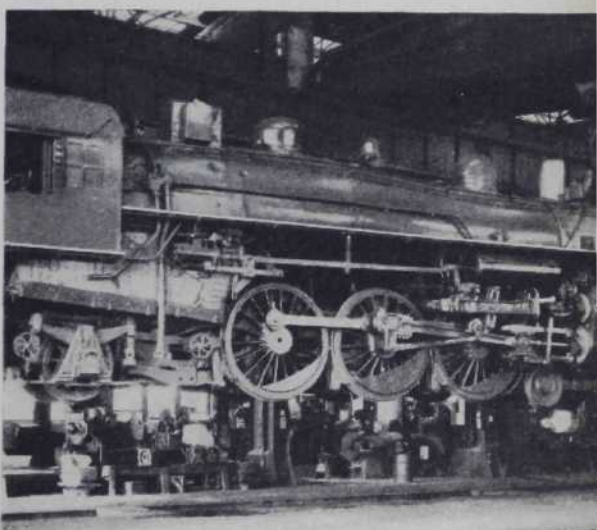
But actual expenditures run far below appropriations. On June 1 they totaled \$4,497,000,000. Obligations, meaning contracts let, ran \$10,181,000. There are two principal reasons for this difference:



ACME



ACME



First, the program for turning such vast amounts into material things to be transferred to foreign nations requires planning far ahead. American industry, geared to a peace-time economy, has had to re-gear to war economy in less than two years. Plants had to be built, tools made and installed, workmen trained, materials assembled, before the wheels could turn. The fact that the implements of war now roll in a steady stream means that the gap between authorizations and expenditures will steadily close.

Second, authorizations for future use accounts for the unlimited power of lend-lease as an economic and political weapon. In its first year, lend-lease fulfilled the important mission of creating a strong front against the Axis nations. It is no secret that these funds have been used to bring sometimes reluctant nations to our side and to break Axis ties which were rather strongly laid in some South American countries.

No report is available on how much any single nation has received. This policy of silence strengthens the bargaining power of lend-lease. Some Latin-American neighbors have held out for very favorable concessions in trade and other economic items, and have got them. The diplomatic battle has been marked by the shrewdest trad-

ing in the history of our relations with Central and South American countries.

About 82 per cent of the amounts actually spent represent goods, 18 per cent, services, the latter including shipping, servicing and repair of warships and merchant ships of the United Nations, new factories and shipyard facilities, bases abroad, and the like.

Lend-lease goods fall into three categories: Military items, industrial materials and agricultural commodities. Military items make up approximately half the value of all lend-lease goods, and in another six months will likely reach 60 per cent. Airplanes and parts, tanks, ordnance, ammunition, field communications equipment, trucks and petroleum are the principal military items moving steadily to the armies of

the United Nations. Small ships, naval aircraft and ordnance, petroleum and many varieties of naval and aircraft equipment and stores are augmenting their navies. Vessels are being repaired in our yards. Lend-lease funds construct naval bases, repair tanks, supply truck parts and airplane depots all over the world-wide battlefield.

Industrial materials total about 23 per cent of the lend-lease expenditures. Machinery and other equipment strengthen, and in some instances sustain, the industries of our allies. American textiles and leathers help to clothe their armies and civilian populations. Industrial aid includes everything from locomotives and machine tools to raw airplane woods. Millions of barrels of

(Continued on page 66)



Keep Them Remembering . . .



WINNING the peace is a subject for frequent discussion . . . and a pertinent one.

But winning the peace is not confined to international relations. The problem will be personal, and, in many cases, difficult. The boys who return from the service will again have the problems of readjustment.

Fortunately, the nation has anticipated one such problem. The boys need not be hunting jobs in such great numbers after

this war as after World War No. 1. Most of them will come back to firms they left.

That, however, is only a part of the solution to their readjustment. The emotional wrench of shifting to or from military service is a drastic one, even for the boys who never see the enemy.

In our Company, we have worked out a procedure that will ease the transition by keeping them from forgetting entirely just what sort of jobs they are coming back to.

Our plan started when one of our ex-stock clerks wrote from camp to his former boss, a branch manager. The manager naturally replied, and some way or other the correspondence got into our house organ. The idea spread. As other boys left, they started writing their ex-bosses.

Gradually it dawned on us that here was something pretty important for several reasons. The boys in camp like to get letters—even the ones who don't like to write them. That is certainly important enough to justify all the letters we care to write but there are other benefits. If we want to make it easier for the boys to come back with us, then the answer is—never let them get wholly away.

Under our system, as soon as a man joins the service, deLancey Kountze, the Chairman of our Board, writes him a personal letter telling him that we want him

back when the war is over and that we are proud of the step he has taken. If he had been with us a year or more, we also suggest how we can help with his National Service Life Insurance. From there, the department manager picks up. He is definitely assigned the job of keeping up a personal correspondence with every one of his former employees during their period of service. The letters are strictly personal, made as gossipy as possible. In addition, every one of the boys (150 today) gets our house organ regularly with an informal personal message from me.

The tone and promptness of the replies that come back shows that they like it. Whether the program will serve the long-time end of easing the personal readjustment after the war, remains to be seen. There is reason to think it will. One of the boys wrote, "If I could come back to the old job today and use what I've learned here with what you taught me, I'd be twice as good a man."

That is exactly how we would like for all of them to feel. If we can help them match up their new military experiences with the problems of civilian life . . . both will be easier for them.

W. H. MATHEWS
Vice-President
Devco & Reynolds Co., Inc.



Is He Lazy or a Genius?

By DONCASTER G. HUMM
with James H. Collins



The day-dreamer may pass through a period of building castles in the air but eventually he will get down to earth and produce

MOST successful business has a "day-dreamer" somewhere in its organization. Science knows how to find them but it won't guarantee results

ONCE upon a time, the story goes, a little factory had an engineering genius, and a big factory wanted him. They bought the little factory to get him, and waited for their genius to report.

He didn't show up.

"Sure, I think I know the very feller you'll be lookin' for," said the big factory's gateman. "A little man with a cruel crooked back—"

"Yes—what do you know about him?"

"Well, sir, he come up to the gate here, maybe a week ago, a-smokin' a big black seegar, and when I said, 'Hey—you can't smoke in here, it's a rule of the company,' he turned right around and went away."

That was Steinmetz. When General Electric located him, he said, "I must smoke when I work."

So they made a special rule, and the rest is electrical history.

That was a half-century ago. Business then had no way of discovering such ability until genius proved it by work.

Today, after 40 years of scientific investigation, we can do better. We could meet Steinmetz at Ellis Island, give him a few tests, simple to take, but not simple in interpretation, and then call up Schenectady.

"Here's a fellow who may perform for you, if you take him for what he is. Don't ask him to ring the time clock. Put him where he can show what he's got, and he may astonish you—positively no results guaranteed."

Business has also progressed. Many large corporations would today try out such an individual, giving him every opportunity to develop.

Not long ago, a young man in one of our defense plants was rewarded for exceptional work. A year before he had

CHARLES DUNN

been a problem to his family. He couldn't hold a job, couldn't keep a schedule, had his head in the clouds. Tests disclosed high intelligence, with strong tendencies to follow his own ideas, and not much hospitality toward other people's schemes or systems. That is, what we call a day-dreamer.

Looking for special talent

THE defense plant put him on for what he was, let him work his own hours, at flexible pay, and gave him an opportunity to try different kinds of work. He got interested in experimental research, disclosed mathematical ability, and made a big contribution toward improved design in less than a year.

"Day-dreamer" generally stands for a visionary, but to the psychologist it describes an individual with inner abilities of high order, who generally finds it hard to connect with the workaday world.

Day-dreamers are not plentiful, and business needs them so badly that it should be on the watch for them.

"We need more Steinmetzes," said a corporation president the other day. "Where can we find them?"

"You need more day-dreamers," I replied, and outlined the kind of individual to look for.

The day-dreamer is a fellow with definite temperamental traits. Put him to work, and he may think out a better way to do the job and install it if you let him. Often, however, he is fired. If he has no job, he will still have good plans for doing work better. He is always busy inside and his schemes are sound. He may seem visionary, but there is a way to test that—question him about details, and he will explain how he has dealt with difficulties, or how much more he will have to learn to deal with them successfully. A visionary, on the other hand, skips around difficulties—"Those are trifles," he says.

I worked once with a day-dreamer who has turned out well, but who at that time might have been classed as a visionary—except for one thing. He wanted a mount for an amateur telescope. Instead of designing it on paper, he built it complete in his mind, could actually see it, check up the dimensions. When built, it clicked at every point.

A visionary's schemes are full of fog patches, but the real day-dreamer's schemes hold together.

Day-dreamers are comparatively rare and of several distinct types so, in looking for them, the business execu-

tive should consider the kind of work he wants improved.

We have an order for more Steinmetzes—let's consider that type, the mechanical. It develops inventors like Ford and Edison; also discoverers in science, the Harveys and Pasteurs; many of the great painters; also battle-winning generals.

Instead of waiting for Steinmetz to show up at the factory gate, I would start with a thousand selected technological students who had chosen mechanical studies themselves, and give them tests. Maybe 25 would show high ability. Of these, three or four might be given trials in the company that needed Steinmetzes.

Again, I would warn, "No results guaranteed," but the company could be sure that it had hand-picked individuals who, with time and opportunity, would be certain to pay for the care bestowed upon their selection. The mechanical day-dreamer likes to work with materials. Another type, the social day-dreamer, prefers working with people. Left to himself, he often becomes a successful politician, but business, with increasing human problems, should not let all the social day-dreamers get away.



They let him keep his own hours and try different kinds of work

There is also the philosophic day-dreamer who builds his schemes in words, musical notes or paint and, finally, the project-building type who works away patiently at his plans, often dovetailing one project into another, until a grand project emerges.

Julius Caesar was a project-builder. Once, captured by pirates and held for ransom, he promised to get the money. He also assured the pirates that he would eventually crucify them. He did.

Had the pirate chief come to me for consultation and allowed me to test

Caesar, I could have told him to let his prisoner go and then run as fast and far as possible to get away from him.

In testing Caesar, I would have given him a list of 300 or more questions, to be answered "Yes" or "No," such as "Do you like to study music?" From his answers, I would have found that he was a day-dreamer of the project-building kind. In his writings and actions, Caesar himself answered enough of these questions to determine his temperament.

This test, by the Humm-Wadsworth temperament scale, now widely used in hiring, placing and promoting employees, was developed by Guy Wadsworth and myself, after a discharged employee, later found definitely insane, had murdered a business executive.

Mr. Wadsworth was personnel manager for the victim's company. I was a consulting psychologist. We set out to devise a test that would detect such insane persons before hiring. It took several years, and there were doubts that such a test could be developed, but the method we worked out has been in use eight years, and has proved useful in many unexpected ways.

We are careful to avoid speaking of it as a "yardstick," because it is chiefly a practical working tool for giving clues to temperament. Eventually it will be improved and perhaps become more exact, but human temperament is elusive. It changes from time to time, so that results today may be changed by the tested individual himself, as he improves his desirable qualities and eliminates faults.

Complicated analysis

THE test, which takes about an hour, is simple, the subject merely marking "Yes" or "No" after printed questions. But the interpretation of results is a highly technical process, the computation of a curve from seven components, as follows:

The Hysteroid, or selfishness in the constructive as well as narrow sense.

The Cycloid Manic, which gives enthusiasm, drive and cheerfulness.

The Cycloid Depressive, giving caution.

The Schizoid Autistic, reflected in temperament as visual imagery, idealism.

The Schizoid Paranoid, or ability to stick to a cause, an idea.

The Epileptoid, or project-making component.

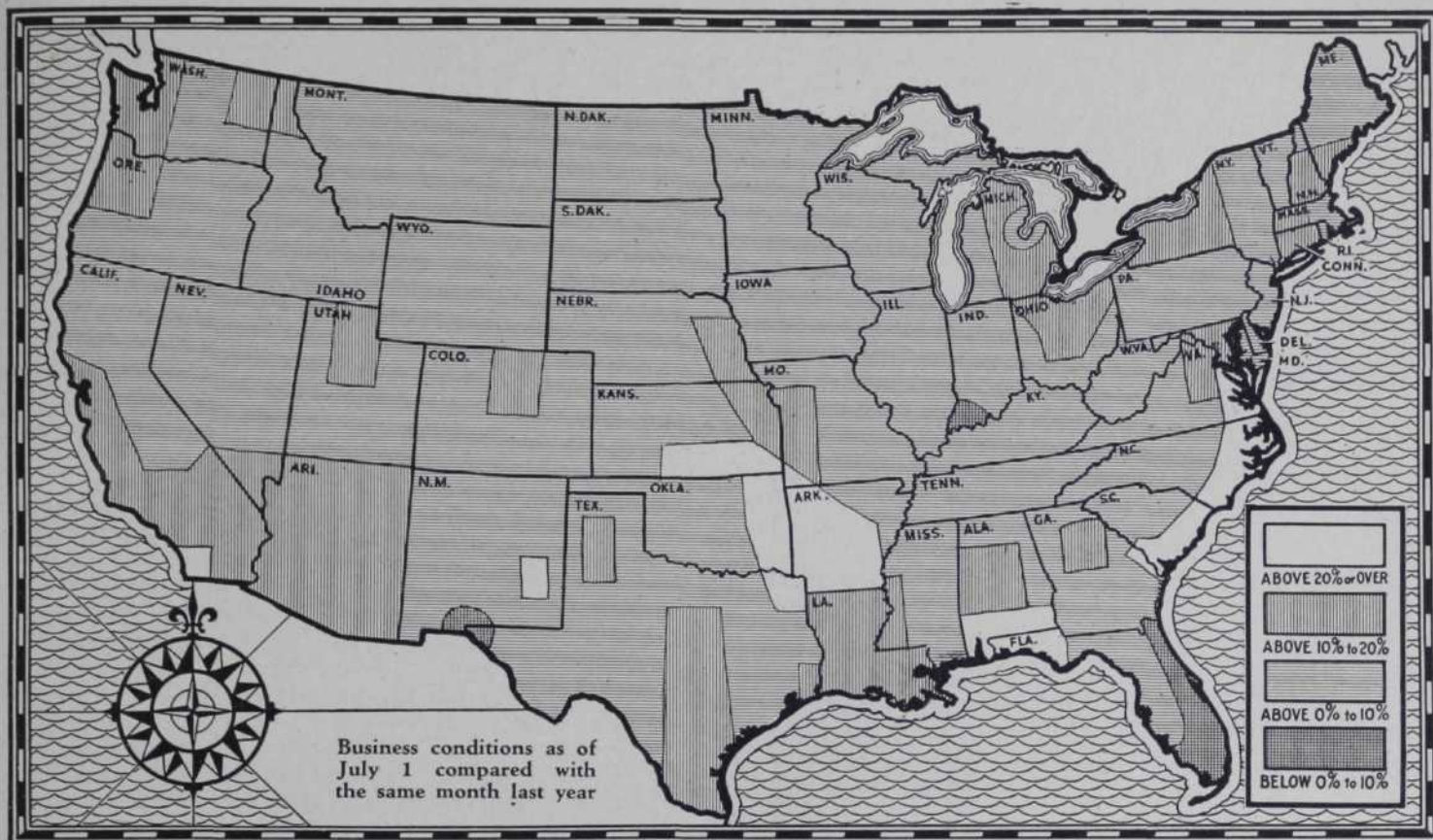
Finally, the Normal, which is self-confidence, self-control, nervous stability.

We have never found satisfactory plain-English terms for these components.

You will probably ask, as most per-
(Continued on page 68)

The MAP of the Nation's Business

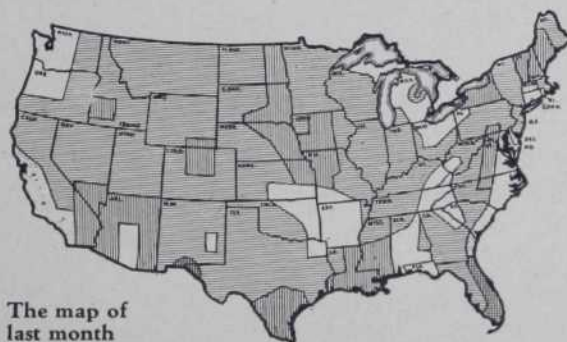
By FRANK GREENE



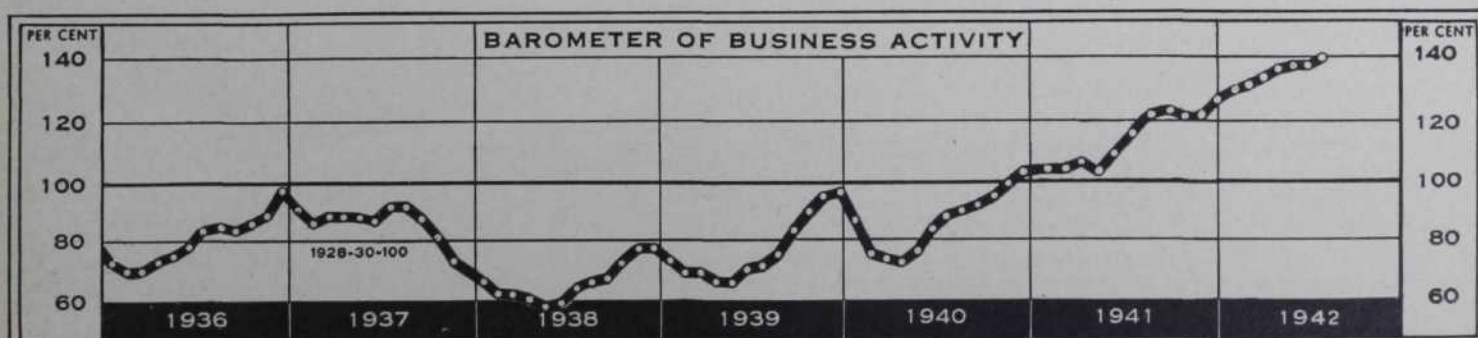
JUNE saw a further advance in industrial production, accompanied by increasing skilled labor shortages. Steel output declined from May due to renewed tightness in scrap supplies as steel requirements increased with the rising production of munitions. Railroad revenues approached 1929 totals with freight shipments nearing an all-time peak despite the slow grain movement. Construction, though below May, ran 64 per cent above a year ago and electric production held its gains. Crude oil output declined further from rationing and tanker shortages. Paperboard manufacture dropped sharply.

Small rises occurred in stock market values amid continued dull trading, while commodity averages, still high above last year, closed the month with little change after early declines. Wholesale sales were retarded by heavy inventories and continued declining retail sales resulting from government restrictions.

Trade declines created by war-imposed restrictions darken Map despite rising industrial activity and national income



The map of last month



Despite the slower pace of distributive trade and the apparent leveling off of wholesale prices, industrial activity was maintained in June and the Barometer again rose slightly to a new high level.

A Full Abundance of

By R. L. VAN BOSKIRK



WEISSBERG-NEWMITH

Silver, a precious metal, is now a substitute for lowly tin in the solder that is used to seal cans

TWO YEARS AGO the smart business man knew how to get rid of merchandise—today the smart executive is the one who knows where to get what he wants.

The customer is in a similar situation. The smart buyer has always been the man who knew where to get a good thing at the least cost—today it's the man who knows how to get what he wants.

The one thing that we have in plenty is shortages. When the public understands why, there will be less complaint and less frantic buying whenever the word is mentioned. This article is an attempt to point out conditions that make shortages of items not so frequently mentioned as metals, rubber and gasoline. It is an effort to show how industry is so closely interlaced that a shortage in one material affects widely divergent enterprises. For example, rationing molasses to get more alcohol for explosives might add a cent a pound to your beefsteak because molasses is an

important component of supplemental feed used to fatten cattle.

This is no attempt to examine all shortages, but a quick look at some of the significant ones. As the war stretches out more and more products which today are plentiful will become scarce.

Beef on the Hoof

PRODUCTION of livestock is exceedingly high. Secretary Wickard and the Meat Institute report there will be no shortage of meat—this year at least. But signs are ominous when the period is projected into next year. Meat rationing is by no means improbable.

Cattlemen are extremely confused over the effect of price ceilings. Fear of unknown price control maneuverings is sending unfinished cattle to market by the trainload—the crop is being “liquidated.”

Many feeders are shipping unfinished cattle because they see loss of profit in present ceiling price of beef. An Iowa feeder said: “We made a crop of fat bullocks last year at heavy loss and that bunch of grief is too recent to be forgotten this year. If the government wants fat, it must pay cost at least, and that cost is steadily rising. All the market will get under present conditions is merely warmed-up steers and grassers.”

To further complicate their worries, cattle marketmen are disturbed over rumors of an area system to shorten hauls which would wreck terminal markets. Truck curtailment and abandonment of many railroad branch lines has already interfered with shipments. Fear that Argentine chilled beef will be admitted despite danger of hoof and mouth disease upsets equanimity of live stock growers.

With all these factors pyramiding upon each other, cattlemen foresee a near date when \$13 and \$14 will fail to pay the cost of growing and marketing. Some of them will curtail rather than increase their herds. Any curtailment plus the present tendency to ship everything in sight will lead to a most serious effect upon the next two years' meat supply.

Soldiers and Defense Workers are Beef Eaters:

THE DEMAND for beef is constantly mounting. Soldiers are increasing and each soldier eats an average of 306 pounds a year in comparison to civilian consumption of 172 pounds. Defense workers, too, prefer beefsteak and roast beef—financially they are in better position to buy it than ever before.

Two-fifths of Pork Going Abroad

WHEN BEEF is scarce or high, housewives frequently substitute pork, but 40 per cent of the nation's output is going overseas for lend-lease. In June the pork stock was 30 per cent less than a year ago. Town people are buying sows and placing them with farmers who guarantee the owner one pig for butchering. Production will

Scarcity

probably exceed any year on record, but if lard, bacon, etc. can be moved across either ocean, consumption will likely keep ahead of production.

Any restaurant habitue knows that pork appears less frequently on the menu. Even ham and eggs are scarce. Retailers are getting one loin when they order five. When consumers complain about prices, they drop it completely. A livestock journal reports that one Chicago woman recently tried to buy a loin at five markets without success.

Meatless Days?

NOT foreseeable now. Theoretically they do not even exist in England, but rationing amounts to the same thing. Some British citizens are demanding that restaurants and hotels adopt meatless days and also limit price of meals. Oysters in England are 20 cents each; smoked salmon, 70 cents a tiny portion. Many civilians want price of meals definitely set as in Berlin.

Fish for Friday

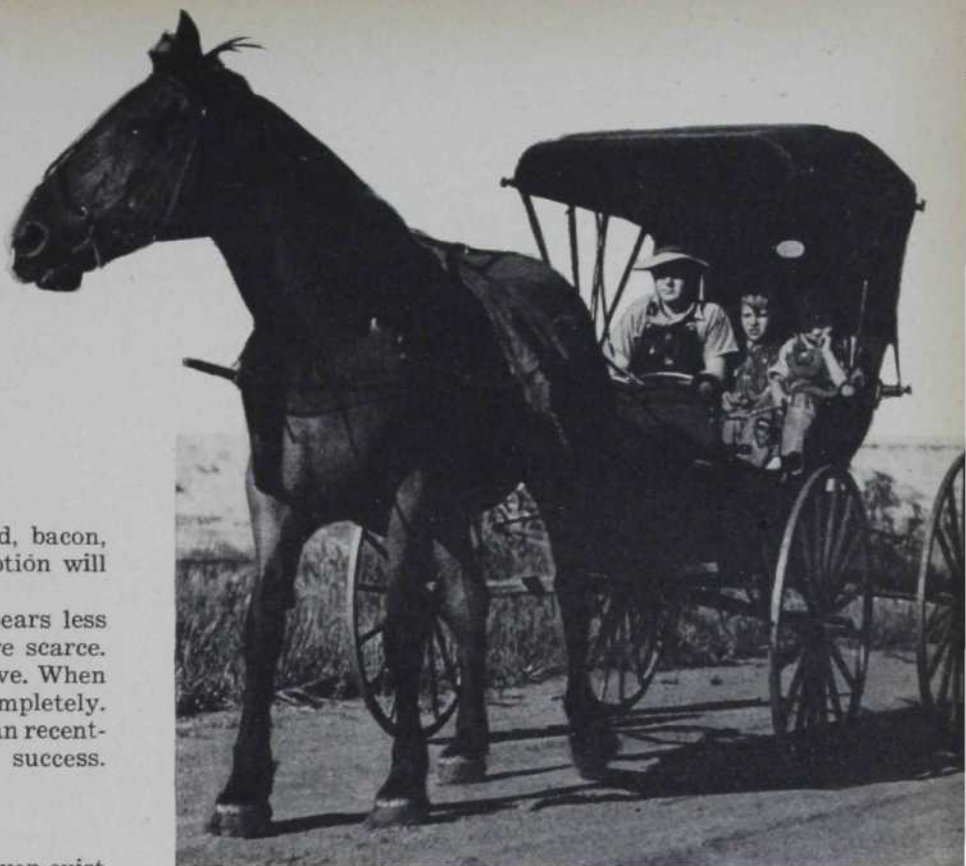
TUNA FISH are out unless someone contributes an ingenious idea for snagging them. Most of the California tuna fishermen were Japs.

Most housewives know that canned salmon is rare



MC MANIGAL

An American pig doesn't grow bristles long enough for brushes, but the British favor his hams



MC MANIGAL

The horse and buggy can't return. Horses are scarce and priorities would interfere with carriage makers

today. The Army uses salmon by the thousand cases. Thousands more are going to England. Furthermore the greatest portion of the pack comes from Alaska—where operations may be difficult this summer.

A shortage of fresh fish is unlikely, but fishing off all coasts is difficult under war conditions and many of the boats are being used for other purposes. However, the English are still eating fish.

Although W.P.B. ordered the fish canners to set aside their entire pack for the Government, a little less than half may be turned back to civilians. Lend-lease will take half the sardine, herring and mackerel pack—what is left will go into commercial channels. Soldiers will get little of the sardine output unless the salmon pack is lost.

Sugar Lost in Transit?

THE sugar situation is a mess. Authorities say there is surplus sugar in the Caribbeans and even in warehouses in this country. Many refineries have shut down because the storage space is full. There is too much in one place—not enough in another. The difficulty in sea transportation is recognized but observers say that local sugar stocks are not moving because the rationers know nothing about traffic. If the jam isn't broken, home-canned materials will be scarce this season. Peaches in particular, a home-canning favorite, will go begging. Women are peeved. One well known Washington woman lost her card—the ration board wouldn't even accept a sworn statement without putting her to unusual inconvenience. Industry leaders think they could unsnarl the tangle in a jiffy if permitted. Mr. Henderson wants to continue issuing tickets—seems to fear a winter shortage caused by transportation difficulties.

Canned Fruits and Vegetables:

IT WOULD take a lot of pencil and paper to figure out what will be left after the armed forces get theirs—especially since we don't know just how beneficent Mother

Nature is going to be. It is also well known that Great Britain could use three times and Russia ten times as much foodstuff as they are now getting.

Shortages of tin, steel and labor are probably the greatest handicaps to all-out canned food production. For some foods—asparagus, green beans, sweet corn, peas, tomatoes, fish and many fruits—there is no limit on tin. For pumpkin, the canner can have only 50 per cent as much tin as he used in 1940. He can get as much tin for succotash as he used in 1941, but no more. Crabmeat, shrimp and mushrooms are going out. Ready to serve canned soup has been discontinued, but most varieties of canned soup are concentrated and still available. There are various qualifications up and down the entire line of canned goods, but the civilian will get only what the Government leaves available.

At present, the armed forces are using from one-fourth to one-third of the entire canned vegetable output. The quantity needed will increase as the Army expands. Lend-lease is getting everything that can be spared.

To meet the problem, Uncle Sam has practically commanded a tomato pack about 25 per cent greater than 1941 (a record year) and a third more canned peas. He expects to get it by guaranteeing to pay growers a good price. If the tomato pack is as big as the Government has asked, Uncle Sam could take all he has asked for and leave a good supply for civil consumption. But no one knows just how good the crop is going to be and the problem of harvesting is not yet solved.

The labor situation in canneries will probably get worse as the war stretches out unless workers are frozen on the job. Canners employ a heavy percentage of women, but many have left for higher wages in war plants. Excessive female labor also creates management problems when perishable crops make 24-hour operations mandatory, and state and federal laws forbid women from working overtime or after certain hours.

Tin

THE emergency may produce a better can without tin. A beauty is already in process although too expensive for general use. Up to now, there is no real substitute for tin cans in any canning method requiring cooking. Experiments are being tried with glass, but it takes time and expense to change over a "canning line" and in addition the problem of a rubber gasket to seal the can is a production man's headache. Plastic tops have not proved workable either—they won't stand cooking or they are too hard for forming.

What is being done? First there was a fair sized stock pile. The Texas smelter is operating on a small scale—expects to go full blast soon. But at best it can hardly supply enough for food canning alone. Salvage plants will enable reclamation of several thousand tons a year. This doesn't include tooth paste tubes—tin reclaimed from them is good only for more tubes.

Economy in can use is rigidly enforced. Things that could be put up other ways—dog food or pork and beans—were barred some time ago. For other items—cans that contain less tin are being tried out—there is no health factor involved. The electrolytic method saves 50 per cent of the tin ordinarily used. Bonderizing or chemical treatment of the ends to prevent corrosion saved some tin. Tremendous savings can be made if these experiments succeed and by the time new operating lines are set up, tests will show what materials can be packed in the various kinds of cans.

Silver is replacing tin in solder for sealing cans. More saving could be made if the silver could be bought at world prices instead of the pegged U. S. price.

Ironically enough, we must supply tin to Great Britain. In control of most of the world's tin before Pearl Harbor, she had no stock pile. A small amount comes from Wales and Nigeria, but not enough. There are several deposits in

this country but, even if the new Westinghouse machine for extracting tin from low grade ore is eminently successful, each deposit is so small that it wouldn't be worth working except under circumstances much worse than now.

A Victim of Shortages Digs Out

ONE food company specialized in coffee, ready-to-serve soups, chewing gum, peanut butter. All these things happened. They couldn't get cans for coffee. Ready-to-serve soup was banned. Chicle for gum became hard to get and their Brazilian organization was turned over to the use of Uncle Sam. Peanuts are being diverted to vegetable oil. What to do? The company is putting in five big dehydrators for vegetable drying and expects to do a big business.

Food companies are being advised to hurry if they expect to convert to war production. The Government is no longer worried about facilities for production—the worry today is over raw materials. Factories that are not rapidly converted may be out of luck for the duration.

Demise of the Farmer-merchant

HOUSEWIVES may as well start mourning for the farmer who comes to the door with his own privately raised poultry, eggs and vegetables. Rubber and gasoline shortages coupled to natural handicaps are about to get him down. Perhaps he can stay in business by selling to the wholesaler.

Chemicals: Ammonia

DESPITE a tremendous expansion program, there was hardly enough for the ammunition plants. It takes 15 to 18 months to build a new ammonia plant in comparison to 12 for an explosives plant. The stuff must be moved in steel cylinders and tank cars—a committee for the industry has been working just to keep it moving. Despite all handicaps, army officers say ammonia production is an outstanding industrial accomplishment.

As ammonia goes into explosives there will be less to supply nitrogen for fertilizer, but fortunately there is a large tonnage of ammonium sulphate produced as a by-product from coke ovens which can be used. Large refrigeration plants will also suffer from lack of ammonia.

Your Gasoline Will Probably Knock

BENZENE, widely used coal tar product, and eliminator of knocks in some gasoline, was almost a drug on the market some months ago. Today every gallon is in demand. It is needed for styrene, a component of synthetic rubber and in aviation fuel until the 100-octane aviation fuel program is completed. It is primarily used in the manufacture of explosives and phenol, great quantities of which are needed for plastics. It is probable that the entire anti-knock gasoline program will be considerably altered after the war as a result of the emergency forced experiments.

Formaldehyde Becomes Ace Product

THE layman generally associates formaldehyde with preservatives and disinfectants. But its importance in the war effort is almost unbelievable. It is made by passing vapor of methyl alcohol mixed with air, over heated copper or platinum. It is used for the manufacture of synthetic resins, varnish, plastics, embalming fluid, insecticides and fungicides, textile chemicals, dyes. Perhaps its greatest use is in the manufacture of other chemicals and plastics. The farmer who needs a fungicide, the housewife who knows about textiles, the merchant or manufacturer who

(Continued on page 86)

"...Plainly Visible to the Shopper"

By ELLEN NEWMAN

SMALLretailers, eager to help in this crisis, find themselves helplessly entangled in the official red tape

AMERICA has no tougher fighter than the independent business man. He is a veteran of wars against unfair trade practices that have threatened to put him out of business, wars against racketeers who have tried to boss him, wars against monopolies that have sought to squeeze him out of existence. Wars against depression and poverty, drought and floods and dust have left him battered and bloody but unconquered.

Now he wants to enlist in the business battle of the century: to check inflation. He is willing to use up his



Binder twine has turned into red tape. To buy, a customer must sign a priority statement

business reserves, his life savings, cash in his insurance policies, and go to live in two rooms over his store—many have done those things—if that is necessary for the preservation of the Government he loves, the security of his family, the future opportunities for the boys he has sent to the armed forces.

But right now the little storekeeper is mighty unhappy. He is so enmeshed in the red tape of price ceilings, priorities and legal phrases that working 12 or 14 hours a day only serves to wind him up the tighter. At the end of a day's struggle with the O.P.A., the W.P.B., the O.D.T. and Regulation "W," the small retailer can't see that he has accomplished a thing

The same dealer who can sell farm equipment at his discretion needs a priority to sell a range

toward what he considers the main job: winning the war and preserving the freedoms that we are fighting for.

Small business people are not out of sympathy with the purpose of the regulations. What they ask is, why must the rules be so complicated, so weighted with work for men and women already overworked, so charged with threats, so subject to constant and unforeseen changes?

A tailor who operates his shop in the back of his little department store and who is a naturalized citizen of the United States, loyal to the point of self-sacrifice, sums up the situation thus:

"For why? I work for myself and for my boy too that's in the Navy. My wife works also. Every penny we can spare we buy bonds. We stay with the March prices. All right. But I should be sewing pants to make money to buy more bonds. But no . . . I got to make the reports, I got to hang up the prices, I got to read the book to find out how wrong I am. I got to worry for fear the police come. For why?"

By July 1 all retailers, except farm equipment dealers, were required to list cost-of-living items. They had to describe each article and show its highest price during March, 1942. Then the list was to be filed with the *appropriate War Price and Rationing Board* of the Office of Price Administration. Country merchants were asking each other on

the afternoon of June 30 where to send their lists. Many of them had written to Washington for blanks on which to make out the report and for information as to where it was to be sent. No answer had been received. Some of the rural merchants sent their reports to the county clerk, or to the county rationing board. Others mailed them to Washington, others to the W.P.B. in the nearest city, almost anywhere to get them out of their hands. It is to be hoped they kept copies.

Complicated price figuring

FROM here on out the merchant must file the first of each month any articles that he has added to his stock during the past month. He will show the wholesale replacement cost, figure his mark-up on the basis of his customary mark-up on similar commodities already in his stock, and thus arrive at the proper ceiling price. An up-to-the-minute list must be posted in the store and prices marked on individual items. The latest ruling says:

The law cannot be satisfied by a book, loose-leaf folder, or card index located near the merchandise. The ceiling prices of cost-of-living items must be plainly visible to the shopper.

Then, the merchant is required to list

the top price during March for every commodity offered for sale by him on July 1. This entails a complete inventory. It is estimated that a completely stocked hardware store, for instance, carries 10,000 items. Hours of work went into this task. "For why?" This list must be open to anybody who wants to look at it. And in the country, storekeepers are telling each other what they'll do in case some customer "has the nerve to insinuate that I'm charging too much."

One tavern keeper has already thrown out a customer who threatened him with the law. When the innkeeper asked him to pay one cent for three paper packets of matches, the customer challenged him to prove that he had charged for matches in March. The tavern keeper won the first round, but now he is worried because he has no records to prove that he did actually charge one cent for three papers of matches in March.

A lumberman, having spent hours over a price list, shows the typewritten sheets and says:

I don't expect anybody will ever ask to see it. It all seems such a waste of time. I haven't changed prices since last August and I could turn back at any time and tell from my sales slips what I had charged a

(Continued on page 93)

The fact that buyers are not asking to see the March price lists shows the regard in which most communities hold their storekeepers



Farm Machines Fight for America

By BLISS ISELY

MECHANIZED farming is raised to new stature of importance by war situation. Progress in design and operation of power implements constitutes a story of notable achievement in multiplying productivity of farm labor, thereby decreasing costs of seeding, cultivation, and harvest.

Not the least contribution is the development of a machine-minded farm youth readily adaptable to the requirements of war industries and the new warfare.



MC MANIGAL

Power equipment has enabled American farmers to compete with foreign peasant labor



The mechanized revolution in farm states has resulted in the disappearance of 11,000,000 horses

IN BATTLING an enemy that has staggered the world with mechanized might, America possesses a machine arm which the dictators neglected as they planned this war. Our nation's farm equipment is the envy of the world. Today we have three times as much power equipment on our farms as we had in 1917.

The wholesale price our nation paid to implement manufacturers for farm equipment last year totalled \$561,697,935. So rapid has been farm mechanization in 20 years that the census enumerators found more than \$3,000,000,000 worth of machinery in 1940 in the hands of the men who grow our wheat, meat, fats, cotton, wool and shoe leather. While, in the Axis lands, man power, woman power and child power yet slave with scythe and cradle, in America gasoline power multiplies our agricultural efficiency so that we can release millions of physically-fit

and machine-minded farm boys for the war industries and the military camps.

How gasoline is magnifying man power on the farms is illustrated by figures from Kansas, our leading wheat and flour state. There, so statisticians at the state college report, it required 35 minutes of the average farmer's labor to produce one bushel of wheat in the five-year period of 1909-13. Today it takes only seven minutes to produce a bushel.

Anybody can figure the reason. The average farmer of 1909-13 drove a team gaited for field work at two and a quarter miles an hour, hitched to a one-bottom plow. Today he has a two-bottom plow drawn by a tractor, geared to five miles an hour. Again, in 1909-13, the average farmer bound, shocked, stacked and threshed wheat, thus requiring four operations and a crew of men. Today with one helper—often with none—he completes the task in one operation by use of a combine.

What has happened in the wheat states has been accompanied by a parallel revolution in Iowa and other corn states, as is shown by a news item published at Flandreau, S. D., where a farmer, Tom Chamberlain, died last November, leaving 80 acres of corn unharvested. Had he lived, he would have husked that corn by hand and it would have taken from 35 to 40 days. But eight of his neighbors, each with a mechanical corn-picking machine, drove into the farm yard one morning and notified the widow that they had come to husk her crop. By noon the entire task was completed and the corn was in the crib.

As a result of mechanization, 11,000,000 horses have disappeared in 20 years. The 1920 Census found 25,741,000 horses and mules, compared with 14,937,000 in 1940. Replacing them is the tractor. There were 229,332 tractors in 1920, 920,021 in 1930 and 1,693,016 by 1940.

Farming with machinery

THE increase in the number of tractors from 1930 to 1940 is significant, because that was the depression decade. But always, when the American farmer has faced a problem, he has solved it with machinery. For a century before 1930, farm implements enabled the American farmer to sell his commodities on the world markets in competition with peasant, peon and coolie labor. When the depression struck, he again used machinery to lower the cost of production. Now he plans to use power equipment to help win this war.

We have heard a great deal concerning farm surpluses, as though they were an evil. How the Axis powers would like to be blessed with such an evil! In our country we will not be troubled with a surplus for long. As men sweat in factories and on the march, they eat more and wear out clothing more quickly.

A certain variety of economist has, in the past dozen years, been branding the farm machine a curse. This economist has shown with considerable

truth that, after a farmer has spent \$1,400 for a tractor, \$270 for a wheat drill, \$170 for a three-bottom plow, \$750 for a combine and \$800 for a truck, he is out of cash and credit. At the same time he is equipped only for wheat growing. It takes only from 50 to 60 days for a farmer to plow his wheat fields, drill the seed and harvest the crop. If he is a one-crop wheat farmer, his idle machinery does nothing but eat interest on his investment for the other ten months.

We should not, however, blame the machine for its abuse. When Washington was inaugurated as President, 97 per cent of our population was needed on farms to feed and clothe the people. Today, with machines, 23 per cent do the same task and the rest of the people are released to make possible the standard of living of which we are so proud.

Thanks are due the implement manufacturer for what he has done for all of us. Moreover a close partnership exists between the man who makes power equipment and the man who uses it.

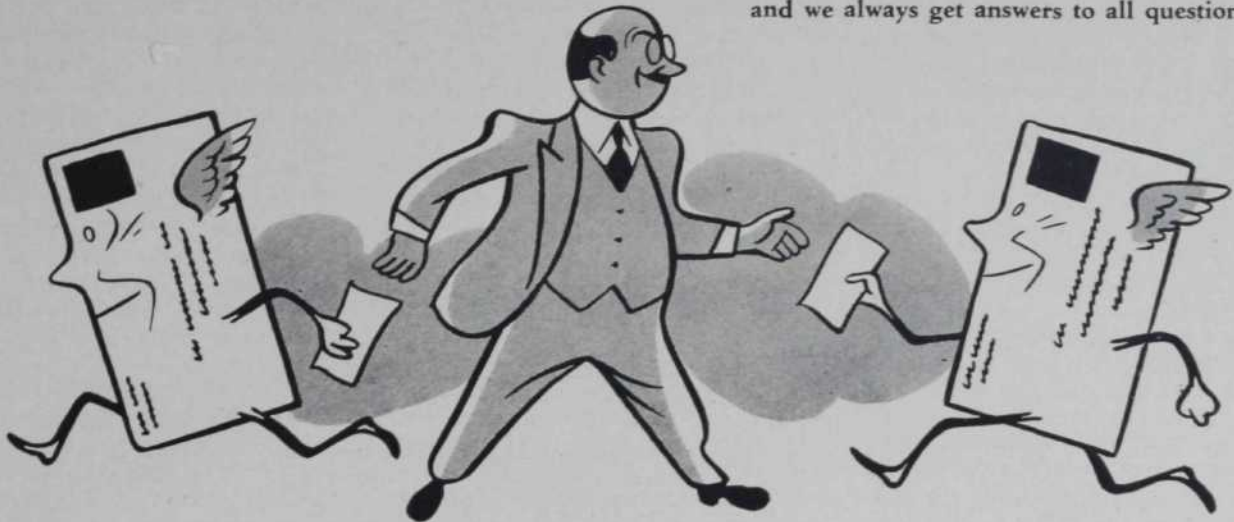
This partnership begins when the manufacturer finances the farmer in his purchase of machinery. Usually the farmer pays one-third down, a second third after harvest and the last third after the second harvest. If the farmer has old machinery, he turns it in on the purchase price, either to be sold as a used machine or to be scrapped. The used machine market, however, is not

(Continued on page 76)

The street and all buildings on both sides of four blocks were needed to house the power equipment show at Wichita



When the boss is away an assistant answers
and we always get answers to all questions



CHARLES DUNN

Received—but Not Read

By TOM JONES PARRY

IF this article had a \$100 check attached, payable to you for reading it, you'd read it. Well, it may pay you more than that

DOES your firm answer letters addressed to it?

Does it do it promptly?

Are the letters which are addressed to it read thoroughly and with understanding?

Are they answered completely?

Do you make proper use of air mail?

Now before you say, "of course we do all those things," take time to check up how your office handles correspondence.

You may be surprised by what you discover.

I am associated with a sales agency representing a dozen manufacturers. Of these, only one handles its routine correspondence properly. The others, at one time or another, all fall on one or more of the points I have raised.

Now you may say, "He must represent some queer firms. They must be second raters." They are not. Without exception, they are large, well rated manufacturers, efficient in everything apparently except in handling correspondence promptly and adequately. Let me give you some examples.

To begin, take the matter of delaying

correspondence. We represent a manufacturer of blowers and suction pumps. In addition to standard models, this manufacturer is prepared to build special machines to meet special problems.

Our municipal railway, a year or so ago, replaced its street cars with trackless trolleys and motor buses. All these coaches had velour upholstery. That meant lots of vacuum cleaning equipment at each car barn.

Since our manufacturer made good vacuum cleaning equipment, we went after that business with confidence.

Right off the bat, however, we ran into a problem. The old street cars which ran on tracks were spaced well apart when they were put into the barn. The trackless trolleys and the buses were nested close together. As a result, our standard portable vacuum pumps were six inches too wide to be moved down the alleys between them. We sent an air-mail letter to our principal explaining the problem, the number of pumps wanted and asking a quotation by return air mail.

An absent executive

A WEEK passed. We wired: "Please reply to our letter of such and such a date." Next morning we received an air mail reply. Mr. So and So, the sales manager, was out of the city. However, he would

reply in detail immediately upon his return.

There is one of the cardinal sins of American business correspondence—delaying replies because some key executive is away. I know, of course, that sometimes such a delay is justified when big decisions affecting policy are at stake, but the number of times routine matters are held up because someone is out of the city is appalling. It might pay you to check up on how your correspondence moves when some



of your key men are away a few days.

Another common failing in business correspondence is for a firm to acknowledge a letter promptly and say that a complete answer is to follow—and then neglect to write the follow-up letter. We have one firm that is a master at that sort of thing. Any letter we write to it is promptly answered—but in many cases the acknowledgement merely says, "the information you desire will be sent you within a few days." A few days and a few weeks pass, and no subsequent letter.

I know what happens in such cases because I've done it myself. You get a letter full of questions that require a lot of hard work to answer.

"H'm," you say to yourself, "I can't take time to answer that now, so I'll just acknowledge it and say that the information will be forthcoming."

So you dictate the acknowledgement promptly and, feeling very virtuous, you put the letter of inquiry to one side "to be attended to later." Sadly enough, that often means, never.

Are you a bit incredulous about all this? Well, here is an example from my personal experience.

Last year I bought a new car and

succeeded) to make my letter friendly and, in fact, gently humorous. I received no reply.

I wrote again, still in a good humored vein, referring to my former unanswered letter and pointing out that it had cost me \$5 to have the wax they sold and recommended removed from my car. I received an answer this time—a very curt letter expressing regret but saying that, since this was not of their own manufacture, the company could not be responsible.

Well, thought I, this is a case for the head office, so I had my secretary make copies of the complete correspondence to date. Then I dictated a new letter explaining the entire circumstances and saying that, as their company had endorsed this wax, I felt that they should stand back of it and make proper adjustment.

I received a prompt acknowledgement; my correspondence was being turned over to their research department which would reply in detail "in a few days or so."

That was more than a year ago and I have received no answer yet. I know it isn't going to break this company but I do a lot of driving and so do my as-

large manufacturer of pipe bending machines—important both in ship and plane construction. We had a big shipyard that wanted ten \$3,500 pipe bending machines in a hurry, but, before ordering, they wanted to know certain things that our literature did not cover. After going over these points thoroughly with the plant superintendent and pipe shop foreman, we boiled them down to ten specific questions.

We wrote our principal, listing the questions. We received an air mail letter in reply, promptly enough, but, instead of answering all ten of our questions, it answered only six, all crammed into one long, involved paragraph.

Fortunately for us, our competitor's principals seemed to be as lax in supplying information as ours was.

Superintendents and foremen tore their hair for days, then placed the order in desperation without complete knowledge of what was being bought. Meanwhile, a vital part of the nation's program had been delayed ten days by correspondence carelessness.

Letters affect good will

WHILE on the subject of national defense, it may be well to mention one common correspondence error: the rather arrogant custom of some manufacturers who ignore letters and inquiries because they are "so busy they can't keep up with the orders they already have."

That sort of thing is discourteous and business should never be discourteous. It is also short sighted. This defense boom will not last forever.

In this connection, we might speak, too, of the practice of ignoring certain letters because they are "unimportant." Few letters, it is well to remember, are unimportant to the individuals who write them.

In '32 an experienced purchasing agent was out of a job. He wrote a letter of application, asking an interview with a paper-making establishment. No reply. He wrote a second time. No reply.

Later he obtained a purchasing position with a chain of small town newspapers—large buyers of paper. Salesmen from the firm that ignored his letter of application call on him regularly—thus far without results.

"If they gave me a better price or a better quality, I would deal with them, of course," my friend says. "But, everything being equal, the business goes to their competitors."

"Did you ever tell why you don't buy from them?" I asked him once.

"Oh, yes!" he said, "and I have a nice letter from the president expressing deep regrets and saying it was an oversight."

Of course it was an oversight—that little human failing is at the root of so

(Continued on page 76)



One of the cardinal sins of business is to delay answering letters because some key executive is away from his desk

decided to wax it myself. I drove to a gas station and, at the attendant's recommendation, bought a can of wax. The label stated that this wax had been tested and approved by the oil company's laboratories.

I followed the directions and, when I was through, I had a gleaming, glistening job I was proud of. However, a few days later, a summer shower turned my beautiful wax job into a sticky, blubbery mess.

The boys at the service station shook their heads. They couldn't see how such a thing could happen. So I wrote a letter to the oil company's district headquarters office. I tried (and I think I

sociates—gas and oil bills of \$200 or \$300 a month are commonplace—but not one cent have we spent with this company since this episode. The sad part is that, with a little imagination and follow through, they could have made a customer for life.

Equally annoying as the failure to answer is the incomplete reply. In our business we serve the defense industries—shipyards, navy yards, airplane manufacturers—and I have actually seen freighter, warship, and airplane construction held up by a manufacturer's failure to write complete answers to questions about their products.

As an illustration, we represent a

They Thanked Him for Coming

By FRED B. BARTON

INVESTIGATORS who summoned James F. Lincoln upon the Washington carpet were soon speaking respectfully to a man who believes what he says and does as he believes

AT 59 James F. Lincoln burst into fame through the medium of a Naval Affairs investigating committee. The odd thing is that he should have waited so long to be discovered. You don't easily hide a man named Lincoln.

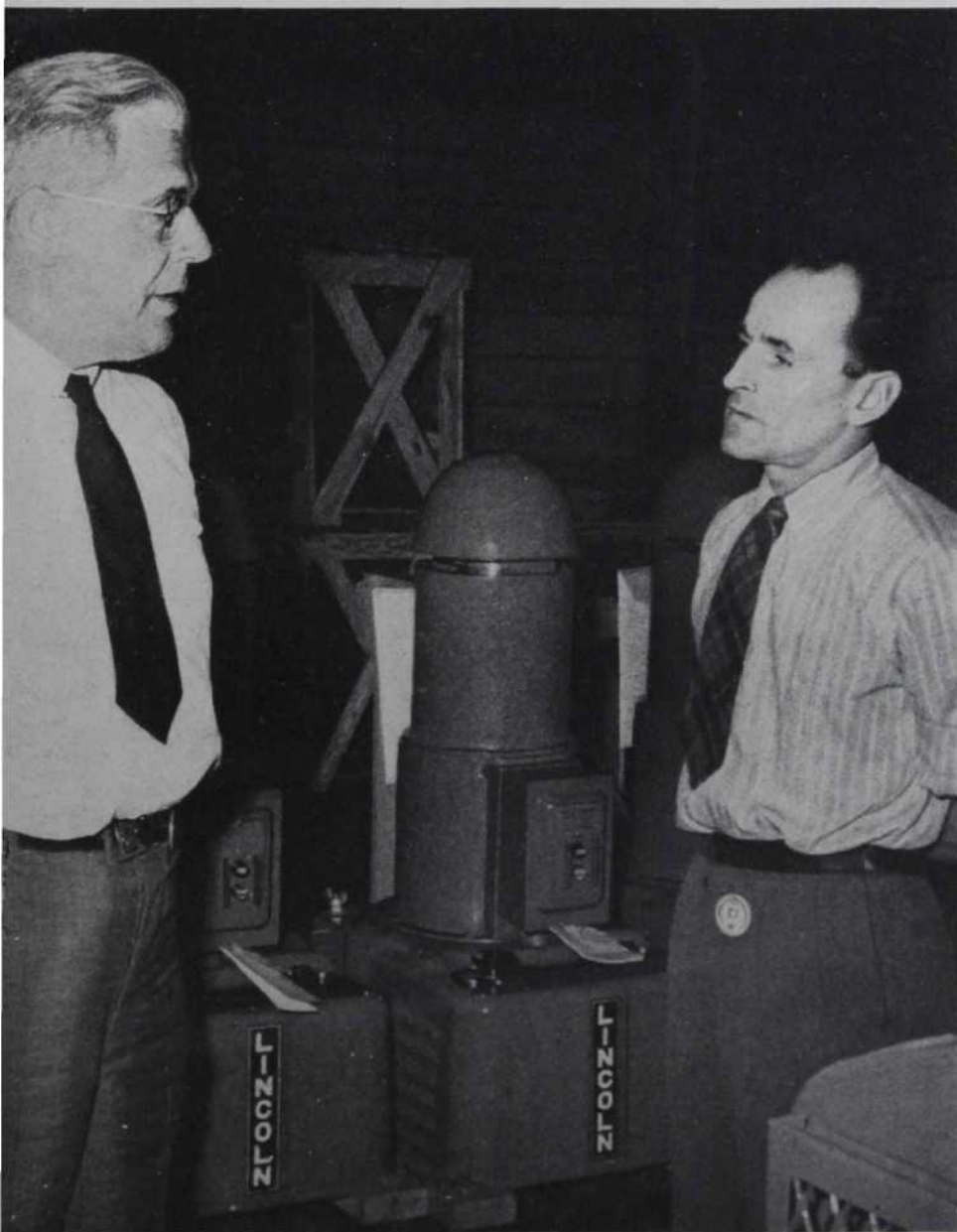
When fame did come, it came brilliantly. Bringing him before a House investigating committee was like tossing Daniel to the lions. The chairman spoke respectfully and thanked him for appearing. The charges collapsed of their own weight. Seldom has any firm been called on the carpet and acquitted itself more capably.

The reason is that James F. Lincoln believes what he says, and does what he believes. His is no act. It is a lifelong principle. He talks convincingly because in his heart he knows it works. And because his business is such a real success, he probably is one of the happiest of today's business men.

Bonuses for all employees

HIS salary is \$150 a month plus a percentage. Every one in his company of more than 1,000 employees works on a similar basis: enough to live on simply if hard times should come, plus a generous bonus when everything goes well. Some of the factory workmen have been receiving a bonus as large as their salary. He personally makes the division. His board of directors, made up of his office associates and no outsiders, allots \$1,000,000 or so for bonuses, and the company president divides it. What surprised the Naval Affairs investigating committee was that he never takes a full share himself. What surprises you and me is that the company is self-financed. Doing a business of \$24,000,000 last year, it has grown on its own fat. It gained its best growth during the depression and afterwards.

James F. Lincoln had the boyhood ambition to be a blacksmith but settled for a manufacturer. He went through Ohio State University on money borrowed from his older brother, played football, was a college leader, and a friend of Charles F. Kettering, who was three years ahead of him in college. Graduating in 1907 he went to work as salesman—in fact, he was the entire



FRED B. BARTON

Mr. Lincoln (left) and a factory worker pose with a new motor generator. Recent developments, using less iron and copper, cut price of this machine in two

sales force—of his brother's company.

His salary was \$50 a month and two per cent of the company's sales.

The next year he wanted to get married. It was still a panic year, and a drawing account looked safer than commissions, so he asked to be changed to \$150 a month and one per cent of the company's net collected sales. *That arrangement still holds*, though he never collects on it fully. He might have collected \$240,000 on last year's sales. Instead he stepped off the pay roll on April 30 for the balance of the year. In 1942, with estimated sales of more than \$35,000,000, he has drawn—and will draw—no salary since March 31.

Started in a basement

THE Lincoln Electric Company was started in 1896 in the basement of his brother, John C. Lincoln, on \$150 of borrowed capital, which was promptly paid back. The original business was winding armatures. Brother John C. was and is considerable of an electrical genius. He developed a motor in which you gain higher speeds by partially withdrawing the armature from the field. He sold this invention, and it became the beginnings of the Reliance Electric and Engineering Company of Cleveland, still in business.

But, in 1913, John C. Lincoln's health

broke down. The younger brother had not been idle. He had saved his salary, repaid the money borrowed to put him through college and had bought a little stock. He was a pretty good salesman. But, in 1913, he was catapulted into the job of being the big boss. The company then was doing about \$50,000 a year.

What happened then was so beautifully simple it became a classic. James F. Lincoln remembered the working system of a college football team. The quarterback calls the signals but relies on the cooperation of all the team. He knew very little of manufacturing. What was worse, every man in the company understood the new boss's limitations. It was a time for frankness and honesty. That was it—plain, old-fashioned Lincoln honesty.

Lincoln talked personally with the department heads of his little company. The men themselves selected one man from each department to work with him as a management committee, meeting every other Monday and discussing the firm's problems and opportunities. This was 1914. That committee still meets with him every other Monday. And the big boss still listens to the opinions of the men in overalls.

The new president had thought of a factory as a mass of machinery plus, of course, some workmen. Now the workmen became real. A man died, and left

no insurance for his widow. Lincoln investigated and found that most of his workmen owned little or nothing beyond their clothes and perhaps their homes. Each week's pay went to pay the preceding week's bills. Briefly and naturally the advisory board suggested the buying of policies insuring each employee of the firm for one year's salary. It was a pioneer move, and only one company in the country was then writing this new group insurance.

Lincoln's handling of labor has never been intrusive or paternalistic. He doesn't baby his help. He attends an occasional bowling party because he likes to, but he spends little time at company-sponsored basketball games or company picnics. He respects his workmen and they respect him. No one, not even his oldest associates, calls him "Jim." To a few he may be "J. F.," but to most of the company he is "Mr. Lincoln."

Vacations for everybody

EARLY in his career, the company advisory board faced the matter of vacations with pay. If vacations are a good thing for the office, why not for the plant? Everybody with a year or more behind him gets a week with pay; any employee of more than five years gets two weeks. They shut down the factory sometime in August and everybody goes fishing, leaving only a switchboard operator, someone to acknowledge the mail, and a couple of repairmen in case something breaks down.

But don't get the idea that Lincoln is a theorist or a softie. Everybody works. Even the company executives reach their desks at 8 and stay till 5:30. Salesmen and branch managers spend six months selling and the other six back in the factory, working.

Back in the 'teens, Lincoln instituted piece-work pay. The workmen were doubtful. Lincoln argued that everything the company bought was priced by the piece. So was everything it sold. He stated a bargain. Time-study men would check each job and set a piece-work rate. If the men doing that job objected to this rate, it would be scrapped then and there. Then the time-study man himself should work at that job a full day, and whatever rate he demonstrated he could earn would be the established rate—it might be more, it might be less, but the men would take it. All right?

The men liked this sporting proposition. Rates then set remain in force as long as the job remains. Some of the workmen make, with their bonus, as much as \$3 an hour. But the company is not dissatisfied—it earns a profit on their services.

Another innovation that the advisory board instituted was paying for sugges-
(Continued on page 78)

Military Secrets and Bars

THE OFFICE of War Information asks us to pass along to the readers of NATION'S BUSINESS the following excerpt from a report by one of that government agency's investigators who has been ferreting out places where military secrets might be disclosed in careless, casual conversation:

"The high class bar, frequented by business executives and government officials, was located in one of Washington's outstanding hotels. Here there was apparently a good deal of loose talk, for the head bartender told the interviewer:

"There is too much military talk going on in this lounge. Every night the men come in with their big rolls and contracts in their pockets and sit and talk about them. We could tell you almost anything you want to know about the Army or Navy. I tell the boys around here if I catch them talking, I'll can them."

In a letter to the editor, Mr. John

Herrick, chief of press section, O.W.I., said:

"I am writing to tell you this because this is a matter affecting business executives who constitute the audience of NATION'S BUSINESS. I am wondering whether you could find a place in NATION'S BUSINESS for some word of caution.

"Presumably the loose talking is particularly bad here in Washington, but similar talking on a lesser scale undoubtedly prevails in other places where men doing war business congregate.

"Any assistance you can give us will be greatly appreciated."

All right, Mr. Herrick, we are glad to pass this along. And by the way, that bartender who "could tell you almost anything about the Army or Navy" must be a jewel.

Anybody who knows even a fraction as much would be a good candidate for the intelligence service.



WANTED

...Millions of Jobs for Millions of Men

TO KEEP IN BUSINESS KEEP YOUR IDENTITY!

*Make Contacts
with Paper and Ink*

- Promote sale of Government bonds and stamps.
- Promote national unity.
- Tell about your war work.
- Tell about prospective improvement of your line.
- Tell reasons for scarcity of your merchandise.
- Advertise products you can supply.
- Discourage hoarding of your products.
- Tell how to conserve your products.

Trufect*

For Highest-Quality Printing

Kimfect*

Companion to Trufect at lower cost

Multifect*

For volume printing at a price

*Levelcoat** PAPERS

*TRADE MARK

Millions of jobs for millions of workers—that's what men of America who now are in uniform expect of management after the war. Forward-looking management recognizes its responsibility to the men who fight, and it plans accordingly.

BUSINESS LEADERS LOOK AHEAD

Many leaders of industry who have enlisted all their productive ability in the all-out-for-victory war effort know that they again will make and market their familiar products—they know there will be a demand for those products because they are making sure of that important point *today!* They know the markets of tomorrow will be won by those who maintain their identity *today*—by those who keep alive the all-important asset, Good Will. Far-seeing industrialists insure a market for their products tomorrow by maintaining their business identity today. And, by the same token, they insure millions of jobs for millions of men now fighting for our way of life!

Of course, the way to maintain busi-

ness identity and good will is through continuous and intelligent contacts with distributors, dealers and consumers. This is a job that can be done and is being done economically with the printed word.

A WAY TO MAINTAIN GOOD WILL

There are many ways to use the printed word to protect your business identity—to keep alive acceptance for your products and to keep intact your system of distribution until it is again needed. A few suggestions are listed in the panel on this page. For some businesses a mailing at regular intervals of only a few thousand folders based on any of these subjects will suffice to maintain business identity, for others publication advertising is required.

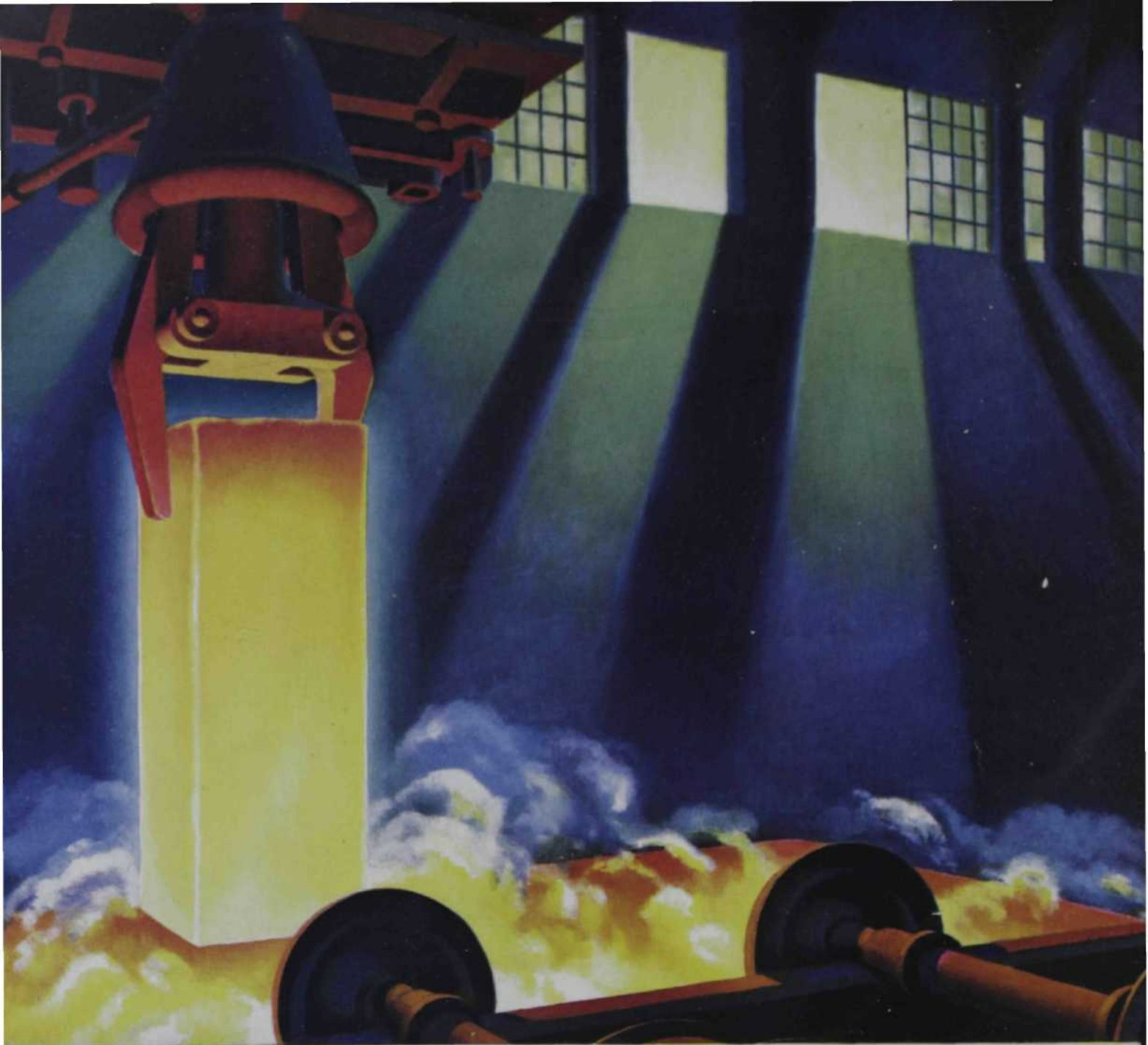
Most business men will agree, it is important to our national welfare that going concerns put the printed word in service for the duration to assure their own survival and to provide millions of jobs for millions of workers after this war is won.

Let there be no blackout of your name!

KIMBERLY-CLARK CORPORATION • Neenah, Wisconsin

Manufacturers • Established 1872

NEW YORK: 122 E. 42nd St. • CHICAGO: 8 S. Michigan Ave. • LOS ANGELES: 510 W. 6th St.



PUTTING MUSCLE IN STEEL

STEEL—the strong man of America—is not by nature a Samson. Muscle must be developed by adding ferro-alloys which remove strength-stealing impurities and give extra qualities before the steel is tough enough to play its part in today's fast-moving world.

One of the most important of these alloys is ferromanganese. Used as a scavenger in nearly all grades of steel, it removes oxygen and minimizes the harmful effects of sulphur. With the addition of manganese, hot steel can be rolled without cracking.

Cleansing is not the only role that manganese plays in the giants' game of steelmaking. In alloying amounts, manganese refines the structure of steel, thus giving it extra strength and ductility. As increasing amounts of manganese are added, exceptional properties are obtained. For instance, a steel containing 13 per cent manganese withstands the tough torture of jagged rock on steam shovel jaws.

We do not make steel of any kind. But we have for over thirty-five years carried on intensive and continuous research and development with ferro-alloys and alloying metals used in steelmaking.

These include manganese, chromium, silicon, vanadium, tungsten, zirconium, columbium, and calcium.

Low-carbon ferromanganese, medium-carbon ferromanganese, and silico-manganese—three manganese alloys which owe their present wide use to our efforts—have greatly speeded and simplified the production of many grades of steel, including stainless steel. You are invited to tap our reservoir of information about ferro-alloys and their use in making the quality steels of today.

The progress made by Electro Metallurgical Company in the manufacture and use of ferro-alloys and in the development of alloy steels has been greatly facilitated by metallurgical research in the laboratories of Electro Metallurgical Company and Union Carbide Company; by the advances in electrical furnace electrodes and techniques of National Carbon Company, Inc.; and by the broad experience in the production, fabrication, and treatment of metals of Haynes Stellite Company and The Linde Air Products Company. All of these companies are Units of Union Carbide and Carbon Corporation.

ELECTRO METALLURGICAL COMPANY

Unit of Union Carbide and Carbon Corporation

30 EAST 42ND STREET



NEW YORK, N. Y.



Washington *and*



Your Business

Listen to It Click

THE pattern of our war business has been established. There will be changes from time to time, of course. A new color may be introduced. The threads may be twisted in a somewhat different way. But the loom is clicking along pretty close to capacity. There will be upheavals in W.P.B. now and then. They may be taken as signs of vigor. An unupheavalled W.P.B. would be alarming. Perhaps 15 food products are due for control. The Service of Supply, U.S. Army, will clash with the other services of the government. You wouldn't say that a fever patient who is not running a temperature is doing well. If S.O.S. did not clash with W.P.B. there would be a break in the war pattern.

Army Planned It That Way

WHEN the war broke out in Europe the Army said in effect:

This is going to be longer than seven years with the wrong woman. We're going to plan in a big way.

The civilian brains thought the military men were somewhat mad. They gave the Army money because money-spending has been the palladium of our liberties lately: or something else; missing words supplied by volunteers; and the more money was spent the more prosperous we would all be. Army spent its share of the money in building ordnance and ordnance factories and airfields and in general getting ready for that long war.

It is not a secret that our guns and tanks and planes are better than any other nation's autumn styles. Never mind what people tell you. That's true. Ordnance has been one fashion show ahead of the other designers of what the well fixed soldier will use. Proposes to stay ahead.

It Isn't a Secret Now

MAJ. GEN. LEVIN H. CAMPBELL is the Chief of Ordnance. He is sandy-haired, peppery; peppery isn't the word for it; that red hot sauce they make in Louisiana is aerated cream by comparison; a business man. The president of a producing company once said:

"With your permission, sir, I'd like to change our methods. I think——"

General Campbell said:

"What the goldarned hell! You're running that factory, aren't you? Why come to me——?"

He is getting as much production as he can take from that factory. From all the other factories supplying Ordnance, for that matter. When he doesn't—Low Bridge, brother. Low Bridge.

We Got One Fine Break

OUR war production pattern was nicely established just about the time those unpleasant military things happened in Russia. No one went haywire on this side, as some one might have gone haywire a few months earlier. Here is the pattern:

We are not planning to build any more war production plants. Oh, maybe a few here and there. Not many. We do not need them. We cannot spare the steel and copper and man-days for the building.

There are production peaks ahead, but for the moment we are on a production plateau. Production will increase as the factories that have been building come in and as the new man and woman power is signed up. There's more calm about this. Not that hurry of the recent past. From now on it's war business as usual.

Raw materials will be closely conserved, prioritied and allocated. Pot and pan production will be cut. Absolutely nothing new in this except that the machine is clicking on it.

Man and woman power will be drafted in 1943, one way or another. Words will be used to cover facts the Administration thinks might irritate the voters. Congress wants to soft-sawther them, too. Best outside judgment is that the voters will be irritated mostly by those who want to play politics with the war. They're in no mood to stand for that.

In for a Long War

ALL this traces to the Army's conviction that we are in for a long war. Two or three more years of it. Then, perhaps, other years of world guerrilla-fighting. A soldier is trained to be a realist from the day he opens his first textbook. Germany can go through another winter's fighting in Russia in spite of all the coddling we have been giving ourselves. In 1943 we will really go to town with Hitler and Hiro. From then on it will be anybody's fight.

Belts Will be Worn Tighter

THE preceding paragraphs are intended to establish the thesis that we have at last gotten down to war-business. After the First War General Ludendorff wrote his memoirs and paid a sour compliment to American industry. Germany had been getting along first rate until she encountered:

"The ruthless energy of American business."

On another page he calls it:

"Pitiless energy."

The old gentleman seemed to think that we done him wrong. Here's hoping that he will learn that for the Army alone 3,000,000 civilians will be working

in 1943 and that there will be 20,000,000 men and women at war work in civilian factories. By that time there may be 10,000,000 in the Army. The present cost of the war is \$1.15 per day for each of our 132,000,000 people. We're as vocal as sea gulls, too, but no complaint has been heard. Anybody's guess at the eventual cost will be placed on file. The winner gets the set of dishes.

There are Occasional Flaws

INDICATIONS are that the planning will be not quite so much like young love in the future. A number of the more inspirational characters have been weeded out. Some of those who remain have their vibrations under better control. It hardly seems likely that a nation which has more corn and wheat in storage than ever before, and which will slaughter 8,000,000 more pigs this year than in the previous best, and can raise almost anything for the table under cooperating climatic conditions and on soil that cannot be bombed, need ever consider the possibility of a serious food shortage. If ration cards are ordered, it will be because they are not to be escaped and not because some one had a revelation. Now and then things will happen. They do in all big plans. We have 100,000 fewer farm workers now than we used to have. That makes a difference.

Tangled Like Loving Eels

WALTER S. Tower, president of the American Iron and Steel Institute, reports that there are not enough shipyards to use the steel plates that are now being turned out. Meanwhile, the manufacture of many little gadgets the housewife uses has been forbidden because steel is used in them and steel cannot be spared. We saved so much paper that now we are burning paper.

All confusing, but being worked into the big pattern. There are something like 185,000 factories in this country and by this time next year every one that is not in imperative use for civilians will be "ruthlessly"—thank you, Ludendorff—turning out war goods. The point is that we are reaching the point of orderly production. A little preliminary running around and hollering may be forgiven a people who are putting on the biggest amateur show the world has ever seen. We didn't even have a script.

Things that May Come

IT MAY be assumed; it is assumed, by Donald Nelson of the W.P.B. and General Somervell of the S.O.S., that the parts of the big machine will fall in place with an occasionally irritating click. Telephoning and telegraphing may be rationed. If this should come about, it will be because there are not enough wires and operators and messengers to handle all the civilian business. Mails may be slowed up. Air travel is almost out now for civilians and train service is being squeezed down. W.P.B. has warned electric utilities people that they do not get any more of anything but that they must keep up their service to the war needs. They have already done miracles but, if the army swells to 10,000,000 and the camps grow, they must cut down for the rest of us. There will be less coffee at breakfast. Maybe no coffee at all. Every one cheers Under Secretary of Commerce Taylor's idea of getting the coffee countries to build little schooners, there not being as many steamers as we would like. It takes time to build even a little schooner. Perhaps it is laboring the point but it should be made again

that these changes will be made in orderly fashion. A good deal of steam went into the whistle for a time. Now it is entering the cylinders.

This Might be a Test Case

IF THIS thesis is wrong, and it is devoutly believed in by the men who should know, the wrongness should be shown by the fate of Leon Henderson's proposal to cost-account the myriad items that go into the making of airplanes. N.R.A. only had 4,500 employes at its top. Henderson has an army and is calling for more men and women. The airplane makers say they do not keep an account of the cost of the small parts. It would not be worth the trouble and the money, they say. Their only customer is the Government and their contracts are covered by cost-plus and renegotiation clauses. They say they could not overcharge if they wanted to and that airplane production would be impeded if they had to set up a small parts costs organization. There are 17,000 parts in some planes.

Comb-out is in Prospect

NON-ESSENTIAL jobs must go. A one-eyed man can stuff lettuce in a drug store sandwich quite as well as today's full powered stuffer. Employers should take notice. In any case men not quite fit physically for combat service will be in the Army back of the line before the year ends. Fit young men will be combed out of the government service.

About That Second Front

TWO ships are being sunk today for one we build. There are not enough ships to carry all the essential supplies to our allies and our armed detachments in 25 different places. If a Second Front were to be created authorities say the need for ships would be so great that all food carrying to Britain and all importations from Latin America must be suspended. Seems probable that an Inter-Allied shipping czar must be named with authority to control shipping. Not until that is done—say authorities—can a fighting Second Front be seriously considered. Bombing will continue, of course.

Pants and Shoes and Shirts

WE MIGHT go semi-pantsless if the war runs another two years. The world's available woolclip, taking in Australia and Patagonia, might not be equal to the demands for stout clothing. Present estimate is that, by mixing cotton and reworked wool in with the virgin article, the civilians can get along almost indefinitely. Most of us have a backlog of old or reasonably new clothes to keep us decent for some time. But the demands of the Army for wool are about five times the needs of an equal number of civilians. More than five times in combat areas. Ten pairs of shoes are the rating for each soldier, what with those worn and being repaired and remade—the soldier's foot needs a larger last every three months—and those on order and the like. Multiply this by shorts and shirts and socks and overcoats and 10,000,000 men. Another thrum on the same chord. The progress should be orderly hereafter.

\$50,000 for 15 Minutes

ELMER DAVIS used to talk five minutes on the radio five nights a week. On the sixth night he freed himself of whatever poison had accumulated in a



Meet a man who is busy on 4 home fronts

The man we refer to is your life insurance agent... and we should like to tell you about four of the important duties he performs as part of his daily work.



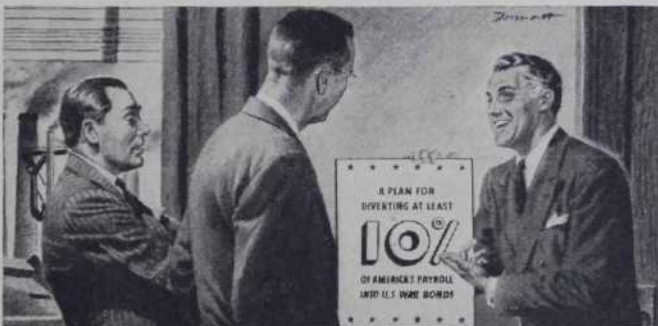
1. In peace or in war, the agent's duty is to provide you with the kind and amount of life insurance your needs and circumstances require—to make certain that your loved ones will be cared for. This service is doubly important in wartime while many men are away from home, and while those who remain at home devote their thoughts to coping with wartime production problems.



2. Your premiums, largely collected by agents, help to build life insurance "reserves." These reserves guarantee that your contract will be paid when due—and in the meantime they help to finance America's war program. About 24% of Metropolitan's assets are invested in United States Government Bonds. Other millions are helping to finance the industries that are pouring out steel, chemicals, food, and other materials necessary for victory.



3. Metropolitan agents helped to distribute more than 100,000 booklets on health and safety, every working day in 1941. In addition, these agents are distributing this year thousands of diet and nutrition posters in the interest of the National Nutrition Program. Agents are also instrumental in bringing Metropolitan's Nursing Service to eligible policyholders. These are works of peace—but specially significant now, when time lost through sickness or accident slows down the nation's war production.



4. Like all good citizens, life insurance men do their share in civic and community work, in peace or war. They serve on Red Cross and Community Chest drives, act as air-raid wardens, and help in other defense work. We are proud of the way agents of all companies are helping to install, in offices and factories all over America, the Payroll Savings Plan—the Plan which makes it possible for millions of workers to invest automatically a part of every pay check in War Bonds.

COPYRIGHT 1942—METROPOLITAN LIFE INSURANCE COMPANY

This is Number 51 in a series of advertisements designed to give the public a clearer understanding of how a life insurance company operates. Copies of preceding advertisements in this series will be mailed upon request.

Metropolitan Life Insurance Company (A MUTUAL COMPANY)

Frederick H. Ecker, CHAIRMAN OF THE BOARD • Leroy A. Lincoln, PRESIDENT
1 MADISON AVENUE, NEW YORK, N. Y.



5. All in all, your life insurance agent, indispensable in peacetime, is doing double duty in wartime. His training and experience are at the nation's service in the interest of victory—on the fighting front in thousands of instances and on all four home fronts in the case of those who must remain behind.

Buy War Savings Stamps—from any Metropolitan Agent, or at any Metropolitan Office.

15-minute broadcast. On the seventh he rested. Good precedent for that. Salary about \$60,000. One night he tore the war-information service of the Government into shreds. An organization of earnest authors wrote to President Roosevelt about it. Secretary Marvin McIntyre telephoned Davis to come to Washington, and he signed on as Chief of War Information. Salary \$10,000. Net cost of one glorious 15 minutes \$50,000.

Be Calm About Dehydration

THE Army has worked out a grand scheme for dehydrating almost everything eatable. Even turnips, though why any one should want to eat a turnip continues to be a mystery. Transportation troubles are reduced by about 90 per cent and the food keeps as it never does keep in its natural form. Those who fear a dehydrated gastronomic future may cheer up, however. An army specialist says that:

Dehydrated foods taste exactly like dehydrated foods, only better.

Returned members of the several A.E.F.'s will not be calling for Henri to cook a little dehydrated mess when the war is over, if this is a fair statement.

A Change in Life

THERE will not be "ruffles attached or applied to anywhere below the bottom of a garment of feminine lingerie," the W.P.B. has ruled. This commentator does not recall having glimpsed a ruffle "attached to or applied" for dogs' years.

Four Related Items

THE Army has cut down its red-taping. The everlasting mountains of reports have been reduced. Officers may use the telephone in discussing business. The Navy gave most of its battleship typewriters the old heave-ho. Then the Compliance Branch of the W.P.B. commenced successive surveys of the records of manufacturers operating under the Production Requirements Plan—9,000 by the account. Coincidentally Mr. Walter S. Tower, president of the American Iron and Steel Institute, took occasion to say that business men are filling out:

More square miles of government forms and reports than in any like period since the invention of ink began the bondage of man to written records.

Bowl of Small Fish

MEXICO planning to keep all Axis capital out of business enterprises in Mexico in the future.—Query: the U.S. plans to "freeze" all Axis-owned enterprises for duration. When the end of the war comes, will they then be unfrozen? And how will Germany and Italy and Japan handle American-owned business?—W.P.B. rules that a combination gas and coal range may not be sold, even if it is not to be connected for gas. It is a "type used in or connected with gas."—But a gas water heater may be sold.—The Army is using water tumblers that can be bounced.—American makers of ceramics are experiencing a real boom.—They believe it will last after the war.—The Russian and German armies are mostly rolling on synthetic rubber.—Puzzle: American censors struck out of a dispatch to London paragraphs telling of the censoring of a dispatch to the Argentine. American censors then permitted the publication of the story of the censoring.—Referred to Elmer Davis: American censors complain that Board of Economic War-

fare insists on censoring anything in which Latin-America is mentioned.—Coal industry is between the U.M.W. devil and the O.P.A. sea. Lewis boosts wages and O.P.A. holds prices down.—Milwaukee has paid all its current bills and has \$13,000,000 in the bank.—Estimated that 30,000,000 pounds of grease might be saved every day at the rate of 1¼ ounces per meal.—Rubber girdles could be saved, too.—We must have more fats to make more glycerine to make more powder.

Do They Ask for Gas?

AMERICANS have no liking for gas as a weapon. But, if the Japanese should care to follow up the 800 occasions on which they used gas against the Chinese, they might be interested to know that more than 1,100 contractors and 250 subcontractors are supplying all the kinds of war-gas and incendiary shells and other unpleasant items for the Chemical Warfare Service. A maker of watch cases is now at work on shells for the 4.2 mortar, a linoleum firm is making bomb clusters, a stove company and a wall paper concern are filling incendiary bombs, and gas masks are being turned out by almost every one. If there is an oddity in the item it is in the fact that these activities have hardly been heard about. Just run of the mine.

Problems of City Population

SOME cities have too many war workers. Transportation, housing, feeding, police and school difficulties are worrying them. Detroit is one city with a surpluse of thousands. In New York 400,000 men and women who would like war work have not been able to get it. These annoyances are being studied and will be corrected.

Factories are idle or working not up to capacity and others are trying to handle more work than they should. Small communities which have war factories face new worries about taxation and the maintenance of order. These are adjustments unavoidable in the national stand-to for war. But order is coming into the picture.

Lines About Big Things

COORDINATOR of Transportation Eastman says the Panama Canal is hardly being used for industrial freighting. That handicaps the railroads. But they are getting along.—Cut in logging under consideration to release labor for other things.—There will be a real campaign for salvaging unused metals.—Thousands of tons of scrap have been found.—The Smaller War Plants Corporation is quietly working out shifts of odds-and-ends work to idle plants that can be converted.—Earlier thought that the small business man might be left to drown has been abandoned.—Higher prices in many lines seem inevitable.—Also higher wages.—Administration still hopes to avoid serious inflation.—Congressional observers think general sales tax will be ordered after election.—New war labor plan is to highgrade the training of workers. If the present employers then have no jobs available they may be transferred to other plants in which they are needed, but their present seniority rights will be protected.

Herbert Corey

Take your time, Jake!

Jake is not dead.

Jake is thinking.

Jake is thinking about his next move.

Jake knows there are a lot of possible moves (mostly bad) in a game of chess. But Jake does not know how many. Shall we tell him? Hey, Jake! Get a pencil. Write down "1." Then write *five hundred zeros* after it. That's how many possible moves in a game of chess!

• • •

We know from experience that, ordinarily, a lot of people would write to us and say, "Out with it! How did you arrive at that figure?" So we will answer them right now:

Dear Reader. We didn't arrive at it. We got it out of a book. We don't know how the mathematician who wrote the book arrived at it. But he is an expert mathematician, and we trust him. We are experts, too, but on a different kind of figure work. Our kind is the figure work connected with business and industry (especially costs and payrolls). We make adding-calculating machines to handle such figure work, and provide an accurate guide to the best management-moves.

These machines are vital weapons in management's battle for increased production. They are fast, to save time. They are economical, to save money. They are called Comptometers. Yours very truly,

*Felt & Tarrant Manufacturing Company,
1712 North Paulina St., Chicago, Illinois.*





Bulk distribution may be in vogue again, but it will bear little resemblance to old styles

Packaging Can Take It

By JULIETTA K. ARTHUR

YOUR favorite brand of merchandise will probably have a new dress before year end. Food and cosmetic containers due for changeover from tin to glass, wood and silver

IT WAS the Napoleonic wars which gave impetus to the development of processed foods. World War II brings packing changes that will have an even greater effect on after-peace commerce.

All of us in the next few months are going to feel the impact of the greatest re-packing splurge this country has ever seen. Whether you're the housewife who'll buy coffee and dog-food in paper packs instead of cans, the man who'll sell cigarettes and candy without a tinfoil cover, or the manufacturer who'll ship goods without transparent wraps and buy truck-oil in wooden barrels, you're

going to share in the national wrapping upheaval.

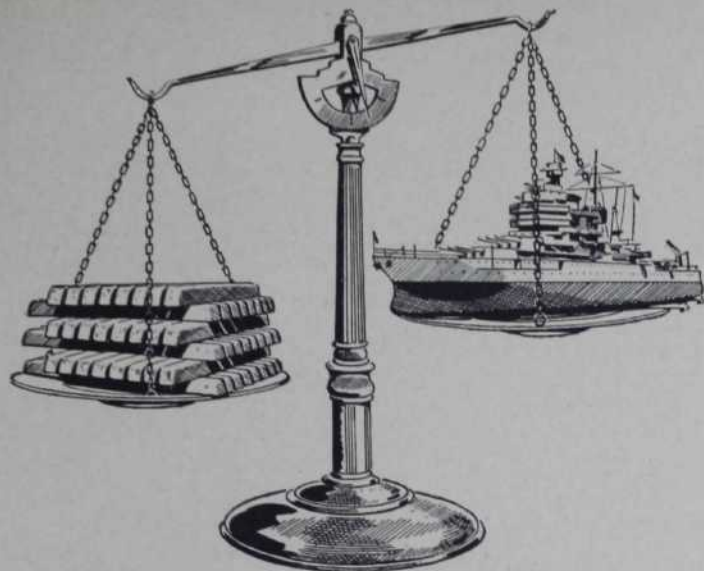
The reason is that modern war cannot be fought without packaging.

If this sounds like just another slogan to you, take a look at the figures from the office of Maj. James M. Berry, chief of the Packing Technical Unit for the U. S. Quartermaster General.

Cotton shirts—just one of 720 packed items of clothing and equipment our army needed last fall—were using up 136,000 boxes, 34 tons of steel strapping, 4,315,000 square feet of interlined Kraft paper, and 45 tons of wrapping paper.

If nailed wooden boxes were used exclusively, our soldiers' shirt-packing took 226 kegs of sixpenny nails. Just one spiral wound paperboard tube for each 75 mm. shell—and the same type of covering protects all loaded shells—will require an estimated 240,000 tons of paperboard in 1942.

Most of the small-size tins that bachelor girls like are going to disap-



How does telephone "scrap" help toward victory?

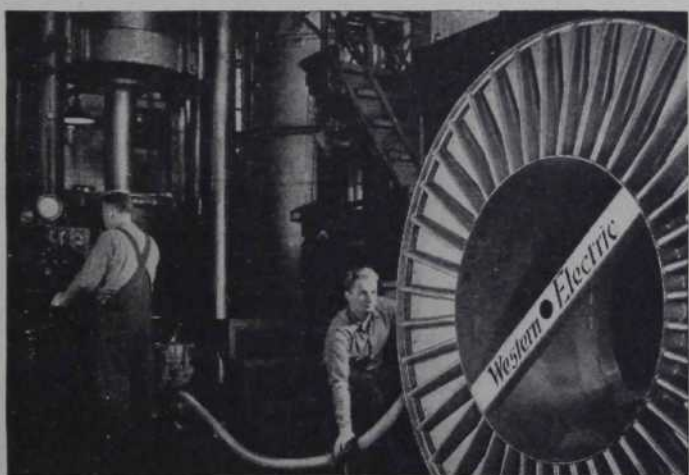
Metal weighing more than a battleship is salvaged each year by Western Electric. When telephone equipment is worn out, we refine the old metal and make it available for use again. In view of today's scarcity, this practice is especially valuable to the Army, the Navy and industry.



① THE SCRAPPED EQUIPMENT IS SENT from Bell Telephone Companies all over the country to Western Electric's smelting plant in New York.



② RECLAIMING OF METAL is in line with Western Electric practice of conserving materials. It has been in operation for more than 25 years.



③ REFINED METAL once went back into new telephone equipment. Today it reports to the armed forces, in communication apparatus made by us—



④ AND IN PLANES, TANKS, GUNS, SHIPS. Propellers like these, one for a battleship, the other for a Navy dredge, are made of telephone "scrap."

Western Electric

... Arsenal of Communications



pear from grocery shelves soon. They're uneconomical, packers say, and more tin is needed for the Lend-Lease program. Up to December 1, according to Roy F. Hendrickson of the U. S. Agricultural Marketing Administration, we turned over to the British more than 2,650,000,000 pounds of farm commodities, enough to fill a solid train of freight cars 550 miles long. About one half of this was canned foods.

There are government bans on cellophane and tin and aluminum foil; there is a curb on tin containers for many "nonessential" products in and out of the food field. Shortages exist in paper and paperboard and coatings such as nitrocellulose are curtailed.

Restrictions in pigments such as chrome, titanium and zinc affect the outside of your boxes and your printing and you'll have to find new ways of tying things up because supplies of adhesives such as animal glue and casein are limited.

The only packaging materials which

do not appear to be scarce are glass, wood, and a few—very few—types of plastics and plaster. The salvaging of waste paper, and the ban on unnecessary use of paper by some industries, notably "dry drugs" and cosmetics, may release enough for increased use in other ways.

A revolution in packaging

IN the face of such lacks, the most widespread package redesigning program in the annals of industry is now going on. The changes range from using end labels on bread wrappers to save waxed paper at the rate of one-half inch per loaf, to the triumph of a flame-proof wrapping which incendiary bombs merely char.

If you want to know what inventors are inventing the most of these days the Patent Office will tell you it's not new weapons of war but containers—everything from mess kits to holders for artificial teeth and napkins. The

Division having the greatest number of applications on hand is No. 40, "receptacles." At the latest count (January 17) examiners reported 1,583 applicants waiting. New mail boxes, vanity cases, golf bags, paper pop and glass beer bottles, wood egg boxes and crates are on the way.

Not many of them will be made of plastics, though. For consumer use they're practically out, not only because of phenols and machinery lacks, but because plants are running from 75 to 90 per cent on defense orders.

In some fields, wood is likely to be plated with erstwhile precious silver or gold. This is not as expensive as it sounds. Designer Raymond Loewy, who has styled everything from a toothbrush box to a locomotive, claims that gold plating now compares favorably in price with chromium. The cosmetic people, hard hit on every package side—with their some 500 different sized perfume bottles about to be standardized down to a dozen to save glass—are already casting a calculating eye on our abundant supply of silver. It's being studied now for alloys to make it harder.

Cans may be silver-lined too. Food-stuffs containing sulphur don't take kindly to silver but certain fruits and vegetables do very well with this protective coat on the inside of the can. Because of its tensile strength, an infinitesimal amount of silver can be substituted for a much larger amount of other metals; two and a half pounds, for example, can take the place of 40 to 50 pounds of tin for some uses.

A boom for glass

BUT the real revolution in the food industry is likely to come through a glass door. Fortunately, basic materials are domestic and plentiful, with the exception of soda ash, necessary for the finer grades of decorative glass. The chief hurdle is the actual capacity of the glass container industry.

Just as the tin can came into its own as a result largely of World War I uses, so this war may sell the public on glass-packed foods. The headline packaging story of 1941 was Calpak's glassed fruits and vegetable line. Mrs. Consumer saw, admired, and bought.

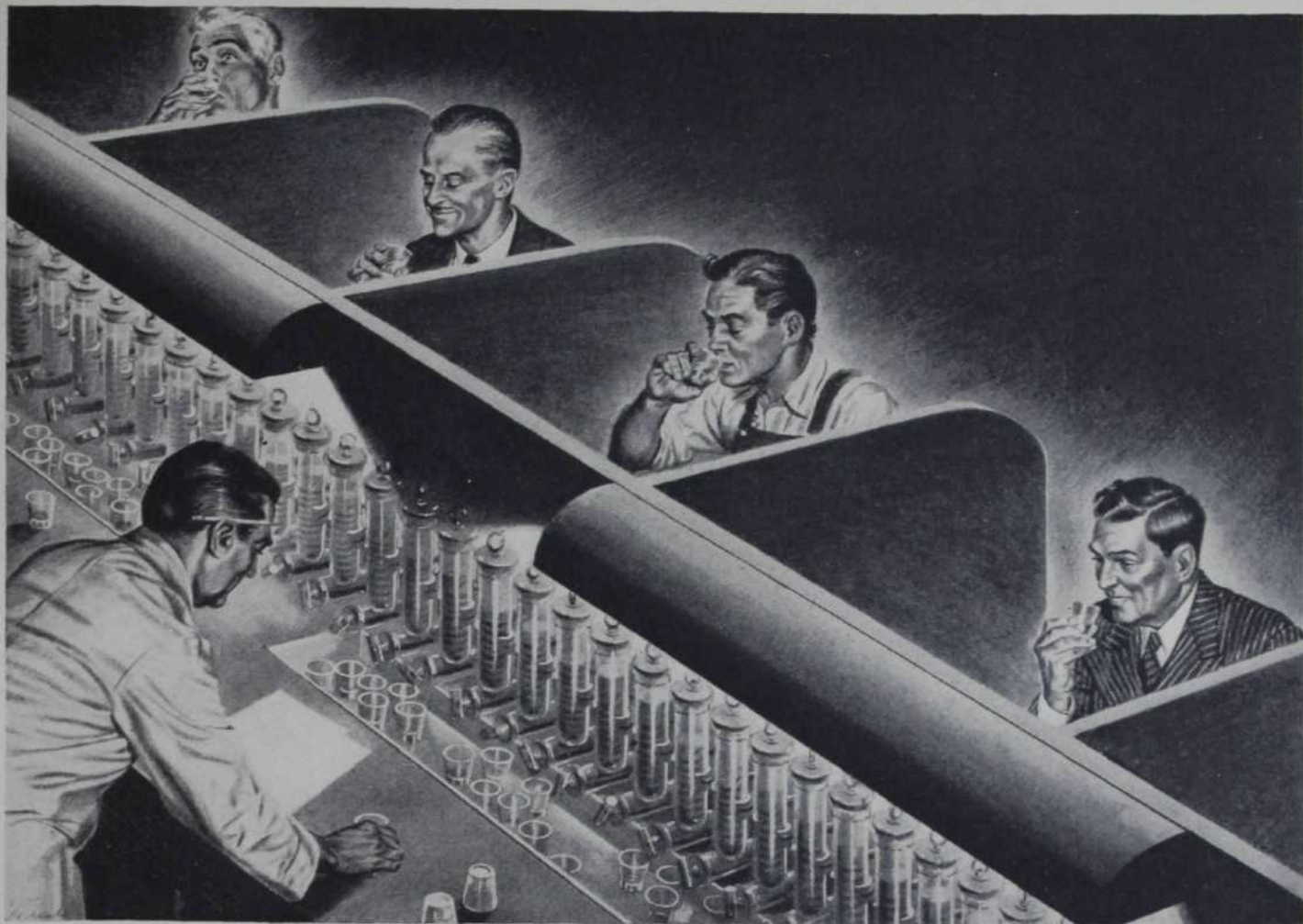
Last year the glass industry operated at only three-fourths of its capacity, producing approximately 68,000,000 gross of containers. Though there can be no big overnight shift from tin to glass, even for domestic consumption, increased use of standard stock molds, simplification and lightweight designing are the answer.

You've probably seen the last of the fancy shapes and odd sizes of containers. Simplification in glass, as in every other packing problem, is in itself a conservation step. Schenley Dis-



The real revolution in the food industry is likely to come through a glass door, but there will be no fancy shapes and odd sized glass containers

MODERN PACKAGING



The Jury whose verdict we never appeal

IF YOU were to visit any of our five great distilleries, you would be invited to serve on perhaps the most unusual jury ever impaneled. Its sole function is to pass judgment on Calvert whiskies.

Its members number thousands of people from every walk of life and from every corner of the land—a true cross section of the American taste. Not a whiskey "expert" is among them—yet their verdict on Calvert whiskies is absolute and final.

For this vast Consumer Jury—which has no counterpart in the distilling industry—literally dictates the kind of whiskey we make.

We have learned from poll after poll, for example, that our *more highly refined* whiskey rates higher

in preference than any of our other whiskies. So we make only highly refined spirit blends—even though it costs us more to produce this type of whiskey.

We have learned that the most minute differences in taste, aroma, even color—can sway the palate's verdict. So we submitted actually *hundreds* of different blends to our Consumer Jury—before we arrived at the Calvert blends you know today!

In short, Calvert whiskies don't just happen. They are purposely blended to please the American taste.

Fortunately, we are in a unique position to produce such blends. For we own the world's largest stock of fine, matured whiskies. And we have

the greatest treasure of costly neutral grain spirits ever assembled . . . the key to delicacy of flavor.

With these almost limitless resources to draw on, plus an accurate yardstick of public preference, our blends should be rewarded with success. And they have been.

It is a matter of record that more people buy Calvert* than any other luxury whiskey in America.

Calvert

The Institute
of Blends

Calvert Distillers Corp., N. Y. C. BLENDED WHISKEY 86.8 Proof. *Calvert "Special": The straight whiskies in this product are 4 years or more old. 27½% straight whiskies, 72½% grain neutral spirits. Calvert "Reserve": The straight whiskies in this product are 5 years or more old. 35% straight whiskies, 65% grain neutral spirits.

tillers Corporation set the pace when they discontinued 526 brands in 1941, all limited-sale items, which accounted for some 75 shapes and sizes of bottles and more than 1,800 different kinds of labels. (The paper, ink, and animal-glue manufacturers, you'll note, were affected, too.)

The new lightweight glass containers have to be tough enough to withstand mechanical and thermal shocks, particularly in food processing—and

with lacquer coatings, and oil and paint cans are coming on the market in black plate (sheet iron or steel that is not plated) or a terne plate (sheet iron or steel coated with an alloy of lead and tin).

It is the electrolytically coated tinplate which is holding out the most significant possibilities for a post-war future. It can be applied in coatings as thin as one-tenth pound per 100 base box of black plate. Like a retreaded

an extreme emergency measure. There is talk that the Government may sponsor a few detinning plants, such as the one operated by the Vulcan Company at Sewaren, N. J., where both tin and steel are recovered. As a more immediate step, however, such products as talcum powder, rat paste and silver polish will appear in glass, wood, fiber or paper—probably the latter in a form that's cousin to the current rigid paper milk "bottle."

Versatile paper and utilitarian paperboard, the first package commodities to feel the impact of defense, may offer the last answer in the race to find substitutes.

Paper must be saved

HOUSEWIVES in Britain are reduced to carrying practically everything but oatmeal and flour home in their hands or in what shopping bags they still own. We haven't come to that yet, but we may arrive there by 1943. Profligate America still has to learn that, as one leading paper company official put it, "three daily newspapers will provide a shell large enough to knock the roof off the Brown House in Munich." Even with 1941 paper production at an all-time record of 17,300,000 tons, the problem is that 50 pounds a month the War Production Board is trying to get out of the family wastebasket. Every pound of waste brown Kraft material is nearly equal to a pound of fresh sulfate pulp.

It's the pulp that's holding us back. With no more coming from Scandinavia, the burden is on domestic pulp producers and their output is being converted at a staggering rate into explosives. Yet, no matter how many other kinds of containers are devised, some kind of paper will be needed to pack them.

The Pulp and Paper branch of the War Production Board and the paper people for a year past have been energetically urging re-use of containers, reduction in board calipers, and cutting of sizes in all types of papers, plus simplification.

First of all, with chlorine on the scarce list, all papers—newsprint and book paper included—are going to be less white. Next, we're hunting new sizes to take the place of casein to hold colors on fancy box and coated papers. Some manufacturers are finding cornstarch satisfactory, with soy-bean size as a runner-up.

The department stores are going after the salvaging problem earnestly according to a survey recently completed by the National Retail Drygoods Association. In New York, for example, 16 out of 20 leading stores now have a special department where packers flatten out boxes, unroll corrugated board,

(Continued on page 71)



A new two-pound preserve jar serves the army for both container and serving jar on the mess table

they're doing it. From a volume standpoint catsup bottles are the biggest item, and their new design is 41 per cent lighter than the old. Quart milk bottles have been reduced to about 17 ounces and one line of medical bottles came down 28 per cent.

The "tinless" tin can, too, may be well on its way into the family pantry by next fall. What's happening in this direction may have lasting effects, even after the Far East tin output is again open to us.

Literally, what tin we have is going to be spread a lot thinner. Food can manufacturers—the biggest users—are already experimenting successfully

with lacquer coatings, and oil and paint cans are coming on the market in black plate (sheet iron or steel that is not plated) or a terne plate (sheet iron or steel coated with an alloy of lead and tin).

Salvaging shaving and toothpaste tins will help. The National Association of Retail Druggists estimates that, if users return all discarded tubes to drug stores, some \$2,000,000 worth of tin requiring comparatively simple reclaiming will be accumulated.

But detinning food cans is not likely to play a large part in war-economy. It's expensive and the National Academy of Sciences recommends it only as



There's room for both... IF !

AS THINGS NOW STAND, there are enough Pullman cars to meet all requirements for troop transportation without seriously affecting civilian passenger service IF . . .

civilian travelers cooperate in making capacity use of cars!

Therefore, you *help your own' cause* by following these simple suggestions whenever you make an overnight trip:

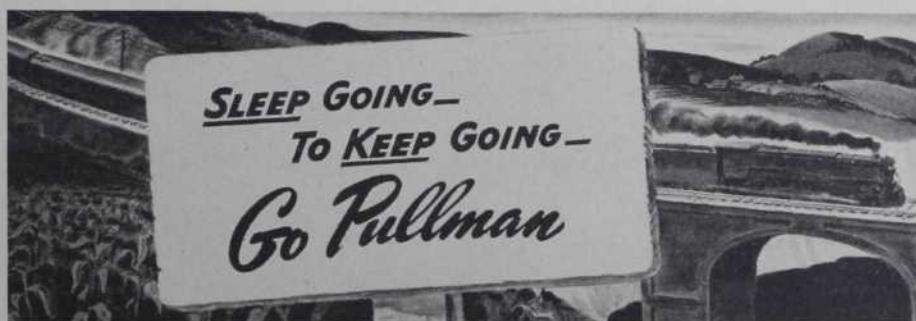
- 1 *Make reservations as early as possible.* This gives Pullman time to send cars where and when they are needed.
- 2 *Cancel reservations promptly if plans change.* This avoids wasteful vacancies by making available to others the space held for you.
- 3 *Ask your ticket salesman on which days Pullmans are least crowded and try to travel on those days.* This helps spread travel evenly throughout the week.

4 *Take as little luggage as you can.* This gives you and your fellow passengers more room to relax in the car.

It is definitely encouraging that very few people, so far, have failed to obtain Pullman accommodations on the trains they have wanted to take, even though civilian travel has increased and so many sleeping cars are needed to move troops.

In some cases, of course, passengers don't get the exact *type* of accommodation they ask for. But whether you sleep in an upper, a lower, a section or a room, you enjoy the comfortable privacy of a soft, full-sized Pullman bed.

And you get the "sleep going" that is so important when you have to "keep going" at an all-out wartime pace.



Copyright 1942, The Pullman Co.

Keep the Retail Doors Open

By FRED DeARMOND

RETAILERS, too, are "converting" for survival. Alternate merchandise and stepping up of service help prevent an epidemic of "For Rent" signs

"HOW will you emerge from the emergency?"

Premier Division of the Electric Vacuum Cleaner Company is asking the question of electrical appliance dealers. Retailers in a number of fields are meditating that point prayerfully.

One authority estimates that from 40 to 50 per cent of appliance dealers already have been forced to close shop, after only seven months of war.

In five Mid-Western states, the National Automobile Dealers Association found that 17 per cent of automobile dealers had failed to renew their annual state licenses at the end of April. With little or nothing to sell, many owners of specialty shops dealing in critical items are closing out, trying to save their capital, get into war work and reopen when the sun shines again.

Manufacturers, too, wonder in what shape they will emerge. The end of high-pressure armament making will find industry keyed up with an intensified production system, a vast pool of trained factory workers and great sources of raw material that can be quickly diverted to peace-time production.

But what of its distributive system?

Unless those channels are kept open, and without some form of customer contact, the manufacturer of an established brand may have to start at the beginning when it's over over there, with little advantage over unknown competitors who may spring up at that time.

Maintaining channels of distribution

ALERT manufacturers are keenly aware of this possibility. It has been the subject of earnest conferences and endless table pounding. They know that some of their capital is represented by these distributive organizations as well as by the machines used to make their regular products and now for the most part standing in storage. Those idle machines will be oiled up regularly; so too, must the marketing equipment.

At the end of 1941, General Motors had 16,000 dealers who represented an investment of \$350,000,000.

In between manufacturer and retailer is the intermediate structure of regional distributors, wholesalers, jobbers, manufacturers' agents and brokers, all of whom play a



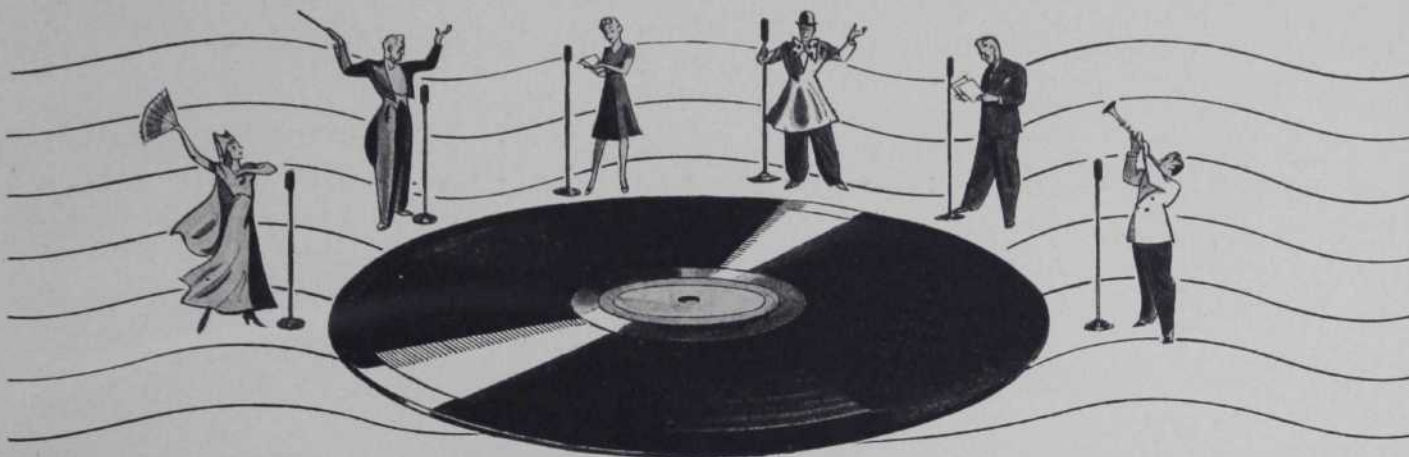
Distribution is no longer rolling at 60 miles an hour but it is still moving—making shift with the goods, facilities and men that are available

big rôle in the smooth movement of goods from farm and factory to consumer. If allowed to rust they will stall the economic machine when it is thrown into gear again.

One of the first aids rendered by manufacturers was that of loans to dealers caught with stocks of rationed merchandise which they couldn't sell. Help in financing the cost of car-holding, made by General Motors and Nash Motors are examples. The Government also lent a hand through the R.F.C.

But emergency loans merely postpone the evil day. Ways had to be found by which dealers could produce revenue, if they were to hold on. Only two ways existed—alternate merchandise and emphasis on service. It is in

THE VOICE OF YOUR RADIO NOW

Speaks from Glass

IN EVERY radio station, electrical transcriptions, or recordings, are a vital part of the broadcasting equipment. These records are used for delayed broadcasts, transcribed programs and auditions.

Formerly, they made these records by coating large metal discs with a plastic material. But when requirements of the war industries shut off the metal supply, an exhaustive search was started for a satisfactory replacement material. The problem was to find a material that was absolutely flat, could be coated properly, was in plentiful supply, and could be manufactured with modern production methods.

After many experiments, glass was suggested and tried. The results were amazing. It was found that glass could be made flatter than any material ever used, that it actually deadened recording noise experienced before, that it also solved the problem of warping. Hence, radio found glass not only a satisfactory, but a *superior* replacement material.

The radio industry is typical of many who have discovered how Libbey-Owens-Ford flat and bent glass products are fitted to serve in a superior way. It is quite likely that our products may open the way for an entirely new use of glass in your own product.

Just consider these facts about glass

It has many qualities not found in combination in any other material. It can be made transparent, translucent or opaque. It can be polished or coated. Its surfaces are enduring and acid-resisting. It is an electrical insulator. It can be made strong, highly resistant to impact and to thermal shock. It can be color-clear, or color-full. And it has a wide range of other physical and chemical properties that fit it for use for many special purposes.

We will welcome the opportunity to explore with you the possibilities of continuing your product with glass. Libbey-Owens-Ford Glass Company, 1393 Nicholas Building, Toledo, Ohio.

**LIBBEY • OWENS • FORD**QUALITY *Flat Glass* PRODUCTS

these two directions that manufacturers are working principally.

Can dealers caught short by the war switch to new merchandise and keep in business? Opinions differ.

The Pontiac automobile people say yes. Their dealers are handling items as diverse as tombstones and chicken feed. One dealer sold three monuments in a week, at a profit of \$50 each. Another is selling Army reject shoes. The Company has found nearly 100 new items for its dealers to handle.

Firestone dealers and company branches are selling literally hundreds of articles in lieu of tires. The list includes phonograph records, fishing tackle, overalls, door mats (notwithstanding Mr. Ickes and his crusade), ladders and shavers, in addition to an extensive line of auto supplies and accessories. Goodrich is following a similar plan.

Once the Carrier Corporation had 300 dealers handling its air conditioning equipment. Now there are about 200 left, of which more than 150 are reported to have fallen in with the

Company's arrangement for them to sell Executone inter-office communication systems and Dorex, an air conditioning accessory. Carrier receives a small commission on sales of the auxiliary lines. These items, it will be observed, are closely associated with Carrier's product.

After extended investigation, Crosley Corporation has selected and placed with a large majority of its dealers a variety of merchandise such as wallboards, chests, paint, furniture, china, work clothes and ice boxes.

The other side of the story: Bendix Home Appliances, Inc. has suggested to its distributors various new lines such as novelty furniture, which appear to have possibilities for a limited number of them. But Merchandising Manager Parker H. Ericksen confesses that this solution has been disappointing, on the whole, and he observes that his company's experience seems to apply to other appliance manufacturers. He much prefers "a sound service procedure," as a new source of revenue.

Dodge Division of the Chrysler Cor-

poration has definitely advised its dealers not to venture into fields of merchandising with which they are not familiar. "The average automobile dealer has a far better chance of surviving this critical period by confining his efforts to the field for which he is equipped, organized and experienced," Vice President F. H. Akers writes to NATION'S BUSINESS. To date only a little more than eight per cent of Dodge dealers have dropped out.

When a dealer goes over into a new field, competition is intensified and new problems experienced. Selling furniture, for instance, is a different game from selling appliances. It takes more capital and more space. Turnover is slower and stocks more diversified.

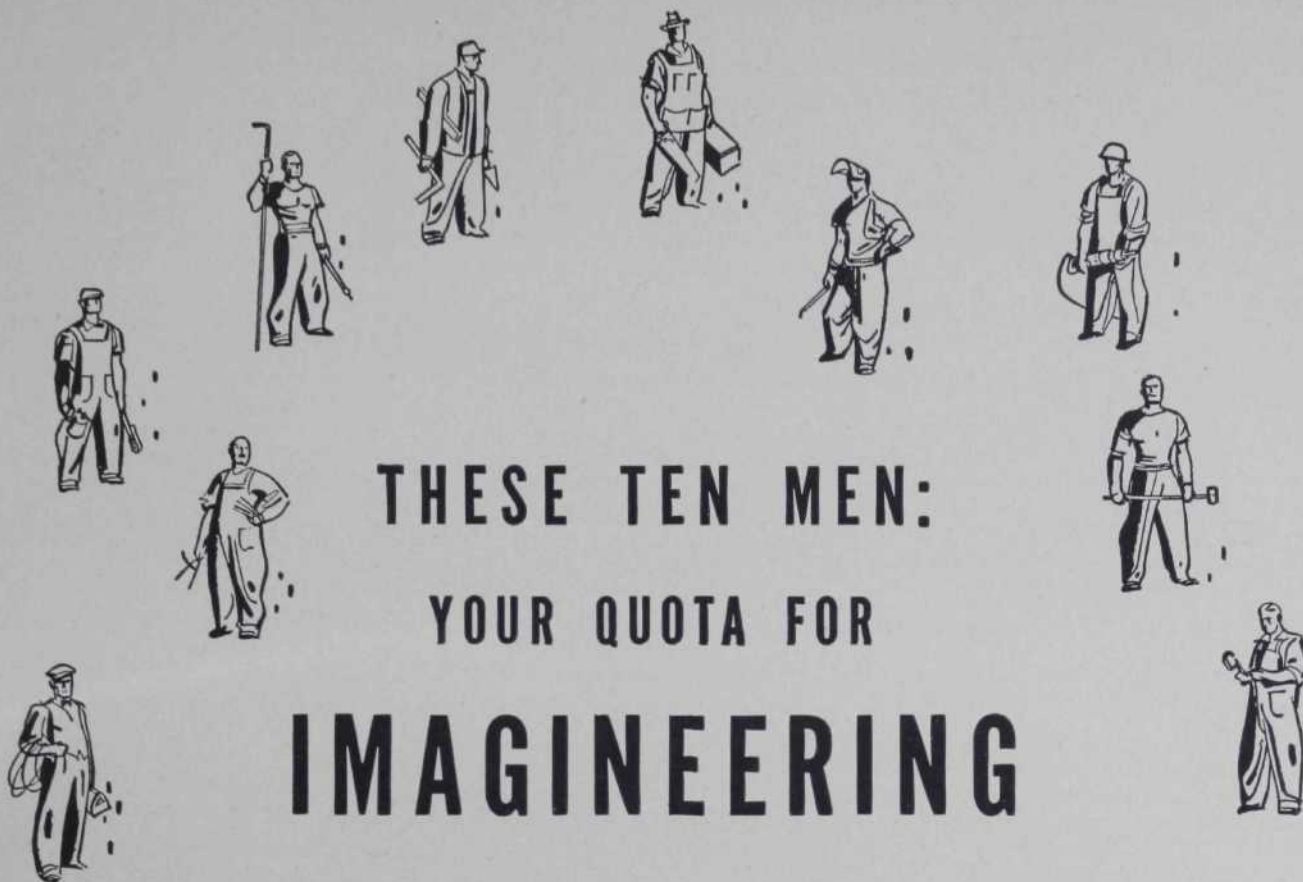
But established retailers can't kick when "interlopers" jump over into their pastures to survive. Hardware men are subject to much of this invasion but they themselves are diversifying. The National Retail Hardware Association has promoted the slogan, "Make it more than a hardware store

(Continued on page 72)



How a "converted" tire store looks today. All the Firestone plants are working full-time on war orders other than tires. Dealers can't live on the few priority sales of stock tires, so

they are now handling literally hundreds of things for the home, farm and garden and recreation, as well as automobile and bicycle supplies



THESE TEN MEN: YOUR QUOTA FOR IMAGINEERING

YOU ARE ONE OF 758,049 business executives before whom we are placing this personal message.

If each one of you were to measure your stake in America's future as the personal responsibility of conducting new jobs for only ten men . . . why then, Business would have over seven and a half million jobs, new jobs that never existed before, ready for the boys coming back, and the men now on war production.

That would be something! That would make a peace that was a peace!

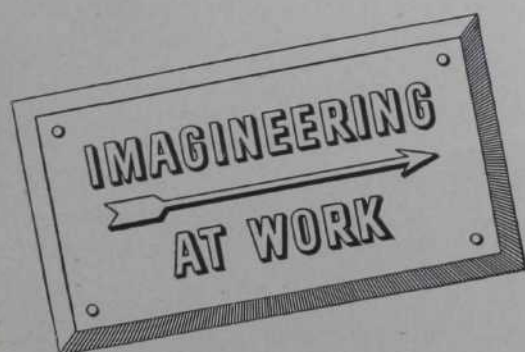
New things to make. New services to render. Old products, old services, improved. These are the kind of things that make new jobs. It takes imagination. It also takes your kind of practical mind. We call the process

Imagineering. One set of tools you can work with are the new low prices, the new knowledge, and the new techniques of Alcoa Aluminum.

All of us have the privilege of building the pump that will flood America with jobs after the war. All of us also have the duty of priming it. We can do it by buying War Bonds and Stamps. Buying Bonds not only finances the war. It not only helps to defeat inflation. It also provides your family with the wherewithal to buy the new things which industry is getting ready.

That's personal Imagineering; getting ready for tomorrow, today.

ALUMINUM COMPANY OF AMERICA, 2125 Gulf Building, Pittsburgh, Pennsylvania.



ALCOA ALUMINUM



WHO NEEDS PAPER GADGETS for his WAR CONTRACTS

War contracts bring involved sets of specifications. Maybe you have never had to consider a paper component in your peacetime product. But maybe today it's a different story. If so, turn for help to Dennison. For in addition to making its familiar tags and labels, Dennison has facilities for working paper into an infinite variety of articles. Here are examples:

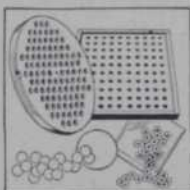


FLARE PARACHUTE PARTS. Parachutes for flare shells are machine sewn from special paraflame tissue paper. Spacer and pilot discs keep cords of another type of parachute from

tangling. These are of heavy binders board, punched, and in the case of the larger disc, are brass eyeletted and then paraffined.

BOMB & MINE TAGS.

The round instruction tags for bombs and mines are metal rimmed for extra strength. One has a metal ring fastening device. Oblong tag carries cotter pin strung through a reinforcing metal eyelet. These are modifications of Dennison stock tags.



SHELL ASSEMBLY PARTS. Round detonator tray is constructed of cardboard discs, square one is varnished wood. Fuze parts, primer discs, washers and powder separators

are made from such stocks as felt, onion-skin, foil, newsboard, cork. Processes include laminating, perforating and diecutting.

SET-UP BOXES.

Dennison set-up boxes package many a high priority item. Sketched is one with a patented hinge to hold steel taps, one with a slotted platform to hold a surgeon's knife, and one with dividers to cushion and protect fragile glass drug ampoules.



If you have a paper-converting problem write Dennison today.
Offices in all principal cities.

Dennison

DEPT. 74 WAR PRODUCTS DIVISION
Framingham Massachusetts

Mines Above the Ground

ONE THING that always impresses foreigners visiting America is the prodigality with which we waste goods and materials.

They did not believe that, in the pinch, if materials came to be momentarily important, we could change our ways.

The pinch has come and we are saving where we must. To fill the gaping maw of Mars we are scraping the bottom of the barrel if need be. So vital to war has salvage become that a drive of tremendous force is now under way to collect waste materials.

This year alone it is estimated that 90,000,000 tons of steel will be required, of which scrap must provide about 32,000,000. This is 5,000,000 tons more than were used last year. Eight steel furnaces capable of producing 700,000 tons are shut down today for lack of steel scrap, according to R. Merrill Decker, New York regional director for the scrap drive.

This great mobilization for salvage is under industry direction, with the War Production Board cooperating. The American Iron and Steel Institute has contributed \$1,500,000 for the initial impetus of what is expected to be a continued campaign throughout the war. To beat the bushes for "junk," the American Industries Scrap Committee is running a full-page message from Donald Nelson in 1,791 daily newspapers—almost a full line-up of the English language daily press. An impressive list of national magazines, plus 61 business papers, 44 farm papers and a large number of weekly newspapers will spread the appeal to all the people all over the land. Finally, the campaign is being supplemented by five-minute spot radio announcements daily over 213 stations.

An effort is made to have a salvage manager named for each industrial plant, to do a "house cleaning" job. Here is where the great bulk of the scrap is expected to come from. Special organizations have been built up to supervise recovery from automobile graveyards, sunken boats and old elevated railroad structures. Railroads have an immense amount of iron and steel rusting away in abandoned track and sidings, guard rails on bridges and curves, and armored grade crossings. Before the campaign began, one western road ripped up 46 miles of unnecessary sidings and turned the rails into scrap.

Without urging from government or the public, industry has been going about the salvage job in effective

ways. Since Pearl Harbor, the Erie Railroad reports having stepped up its metal salvage from 1,900 tons to 2,288 tons a month. International Harvester Company announced that, through its 8,500 local farm implement dealers, it has collected 35,000 railroad carloads of scrap metal.

Still another example has been set by the Western Electric Co., manufacturing subsidiary of the Bell Telephone system, which went to the trouble to film the operations of metal reclamation at its Nassau smelting and refining plant on Staten Island, N. Y. The company reports that no less than 75,000,000 pounds of junk metal was salvaged for reuse in the Bell system last year.

One small telephone part, called a relay spring, has at its tip a minute contact point of a very scarce metal. Every tiny tip in rejected parts or old phones is saved, even though a microscope is needed to see one. One of the Western Electric manufacturing operations is an acid bath for cleaning newly-made copper wire. The amount of metal it takes from one wire is scarcely measurable but, after large quantities have been dipped, the solution yields tons of pure copper.

Scrap metals are separated

WESTERN Electric says that segregation of scrap metals is the first step in reclamation, and the most important. Machine scrap is segregated at the source—that is, in the company's factories. The men who do this job can recognize 100 types of metal at a glance. Metal sorters are really *miners above ground*. Only after they have done their work of scientific segregating is the scrap ready to go to the smelter.

Later it emerges as strip metal for all kinds of telephone uses, thus releasing virgin metal for weapons and explosives.

Also illustrated in the film are the company's methods of introducing alternate materials into manufacturing where the needs of the war machine can be so served. It is said that enough aluminum has been replaced in telephone operations to have put 532 fighter planes into the sky.

"Mines Above Ground" is a two-reel sound-on-film picture with a showing time of 19 minutes. Prints are available for either 16 or 35 mm. projector. Inquiries regarding its exhibition should be addressed to Western Electric Motion Picture Bureau, 195 Broadway, New York City.

MANAGEMENT'S

Washington LETTER

A last minute roundup by a staff of Washington observers of government and business

THE DOMESTIC FRONT FACES continued confusion, lack of clear-cut policy...until after the November elections.

White House and Congress tend to look at vital internal problems through vote-colored glasses.

Politics stalls decisive action on such basic issues as

- Inflation and wage stabilization
- Gas and commodity rationing
- Synthetic rubber program
- O.P.A. enforcement
- Drafting of married men, 18-year-olds and manpower for industry
- Forced savings
- Sales tax
- War information policy

There will be much temporizing on these and other issues until the new Congress is elected and important state contests such as New York governorship, are decided at the polls.

Serious military reverses could change this outlook in the next three months. An alarmed public would force action. So far the public is worried but not alarmed.

For every military realist who speaks out, there is a Congressman May who cheerily assures the nation that the war will be over before long.

Confusion in public mind is heightened by (1) headlined disputes among government officers, and (2) tendency of newspapers and radio to overplay good news, underplay the bad.

The citizen still doesn't know whom or what to believe.

To most of the country the war is far off; it hasn't seen the "blood and sweat."

That's one reason there is so much "politics as usual."

So—hold your hats until November. Then—look out for action.

► BIG ISSUE AHEAD:

Where shall the dividing line be established between military and civilian control over internal affairs? This issue is inevitable; it's arisen in all our wars; is coming up fast in this one. Situation is this:

Production problem has been licked. Transportation of men and materials to the fighting fronts is under way.

Fighting will hold the nation's whole attention in the not distant future.

Then will come the big show-down as between civilian and military officials.

Two straws show the wind is blowing but do not yet indicate direction.

One is Donald Nelson's battle with Lieut. Gen. Somervell over control of production.

The other is the dispute between civilian and military officials over how far the public is to be taken into the Government's confidence on conduct and progress of the war effort.

In both cases the Army has carried the ball for the military, but the Navy has quietly supported the Army.

So far it's a draw between the civilians and the military.

Nelson has won the right to determine how much of the civilian economy shall be held intact; how much of our production materials shall go into manufacturing for civilians, how much for war.

Gen. Somervell wanted this power for the military. He failed to get White House backing.

Army and Navy will, however, control their own production within overall limits fixed by Civilian Nelson.

It's in the nature of things that Nelson will place more importance on protecting the home front than would the military.

The fight isn't over, however; it may be a constant, continuing struggle.

The military has won Round One in the dispute over how much the public is to be told about the war, and by whom.

Director Davis of the new Office of War Information has been fighting to loosen up Army and Navy information, to channel all information through his office.

Secretary of War Stimson went to the mat with him in the case of the German saboteur trial.

Davis won minor concessions, but the military still decides what is "safe" for the public to know about military affairs, and how it is to be told.

Here again, this is only the first round.

NOTE: Director Davis is having plenty of trouble overhauling the Government's sprawling information offices, cutting down the \$27,500,000 press agent pay roll. He has felt obliged to keep many top employees of the old agencies, avoid hurt feelings.

RESULT: O.W.I. threatens to become just another new agency atop an already top-heavy structure. Davis is trying valiantly, however.

► W.P.B., re-aligned, is ready to begin its new functions. These are (1) to parcel out materials of production as

between civilian and war products, and (2) to step up production for civilian needs.

The head-long rush of industrial conversion to war is already being checked. A leaf has been taken from England's notebook, for England found that too much conversion hindered rather than helped the war effort.

Production for consumption is considered by many W.P.B.ers to be the best possible safeguard against inflation.

So, consumer goods are to be turned out at highest possible rate consistent with war needs.

BUT—don't cheer too much. Plenty of deprivation and hardship lies ahead.

What it means is that civilians will not be as bad off a year from today as they would otherwise. They won't live as well as they do now, by a long shot.

Simplified, standardized models of refrigerators, stoves, etc., made by one manufacturer and distributed by other organizations in the field, without brand names, are coming soon as "Victory Models."

Many brand names will disappear, save in advertising designed to keep them alive until peace production is resumed.

► Leon Henderson's O.P.A. is groggy, but it's off the ropes.

Congress is relenting—a little—in its open hostility. The folks back home are beginning to get stirred up a bit by fear of inflation.

Retail organizations are pressuring Congress to give Henderson a chance.

There are signs of popular sympathy for O.P.A. as the underdog—everybody's been kicking it.

But it's still true that Henderson can't control commodity and service prices without stabilization of farm prices and wages. And there's precious little progress in this direction.

White House and Congress are both fearful of angering labor and farmers with an election coming up.

RESULT: O.P.A.'s price ceiling is beginning to sag.

Fast footwork will be needed to prevent complete collapse.

PREDICTION: Next few months will bring higher prices, higher wages, general increase in cost of living.

Whether and how soon inflationary forces can be controlled after November elections is a wide-open question.

Public uncertainty is reflected by stock market. The people buy stocks when inflation threatens, sell on war reverses. If we get more inflation PLUS United Nations victories, the market will see fireworks.

O.P.A. SIDELIGHT: Henderson's demand that Chicago drop its street railway fare from eight to seven cents has far-reaching significance. Local utility rates have always been controlled by local or state authorities. Is O.P.A. to supersede them? If local transportation, light and power, telephone and other utilities can't meet rising costs with rate increases, service deterioration seems the only answer. Sherman knew what he was talking about.

► TAXES: Better reserve judgment on the House bill. It will be re-written in the Senate and probably again in conference.

Senate leaders hope for final enactment in October. This looks like a reasonable bet.

Senate finance committee will give more serious consideration to impact of excess profits taxes on working capital and reserves than did House ways and means group.

Sales tax is still out.

Same goes for forced savings, except possibly in mild or modified form.

Lower income brackets will not be seriously tapped until after elections.

Sometime next year there will be a new tax bill. It will be a lulu.

► Transportation: Behind the scenes

in Washington there's been hot argument over a proposal, chiefly by younger "liberals," that the country be divided into zones and that non-war producers be prohibited from shipping their products outside the zones in which their plants are located.

The English have been trying the zone system with doubtful success.

Applied to the United States, the zone plan would mean grand-scale disruption of distribution organizations, possibly more industrial shut-downs, further shifts of labor.

For the present the zone idea has been shelved. Practical men in government prevailed.

There's still no outward sign of marked improvement in the ocean shipping outlook.

Local transportation headaches are multiplying as private automobiles are laid up and heavier loads are thrown on public facilities.

Prospect is that more steel and other materials will have to be released from war purposes for manufacture of more busses and street cars.

Many states are failing to make good on their promises to remove, for the duration, state barriers to truck transportation.

Result is that important war materials



1

ST IN INDUSTRIAL DUST CONTROL

FOR PROCESS DUST

★

ROTO-CLONE
Combined Exhauster
and Dust Separators

AIRMAT DUST
ARRESTERS

AIR FILTERS

★

ELECTROSTATIC
FILTERS

AUTOMATIC
FILTERS

WASHABLE UNIT
FILTERS

ENGINE FILTERS

Send for
Free
Bulletins

AMERICAN AIR FILTER COMPANY, INC., 109 CENTRAL AVE., LOUISVILLE, KY.

IN CANADA, DARLING BROTHERS, LIMITED, MONTREAL, P. Q.

have been held up time and again at state borders.

Much truck tonnage and rubber has gone to waste because of varying weight requirements of state laws. Some states still fix maximum loads lower than federal minimum load requirements. The trucker is caught in the middle.

One trucking company rushed emergency supplies to Florida for the Navy recently and didn't stop to consider state regulations. Before the trucks and men could return to point of origin, a competing Florida trucker had demanded part of the haulage fee, and the "offending" company was quizzed by long distance phone by Florida state police.

Another attempt will be made by Director Eastman of Office of Defense Transportation to obtain cooperation of the states.

► Here are two significant trends which business men should note:

1. There are definite signs that A.F. of L. and C.I.O. will work in future as a team, whenever major war problems are dealt with.

2. An era of closer cooperation between business and labor is in the making.

President Green of the A.F. of L. and President Murray of C.I.O. are working together on joint labor approach to economic problems in which labor has a direct stake. Inflation, taxation, wage stabilization and the like.

They will preserve their separate identities but work together. The day is gone when the two main labor organizations opposed each other automatically. It went out when John L. Lewis left C.I.O.

By the same token, business and labor leaders are finding large areas where their interests are identical and within which they can cooperate.

Labor has just as big a stake as business, for example, in removal of government controls after the war, in preserving the profit motive.

Through labor-management committees in more than 1,000 industries, labor is learning a great deal about management's problems, and vice versa.

► BY THE WAY: Big cargo planes are coming fast. Glider trains, pulled by a single plane, also are not far off.... Women are going back to the kitchen in droves; can't get servants. So sale of big homes is down, small homes up.... Look for an anti-hoarding campaign. There's three times as much cash and currency now outside Treasury and Federal Reserve banks as in the lush 1920's. Reserve banks are trying quietly to pull hoarded money out of hiding, into war bonds. The banks know where the money is.... You can get a hot argument over whether civilian holiday travel should be shut off. England shut off recreational travel, then reversed itself when worker efficiency fell.... Bernard Baruch is still very active behind the scenes as counsellor to Mr. Roosevelt. Sometimes it's the voice of Henderson but the hand of Baruch.... The President's remark about possible seizure of tires was magnified by the press out of all proportion to its real weight. He was discussing several possibilities; nothing immediate is intended.... Scrap rubber collection was deep disappointment to everyone but rubber companies. The collection adds a year's supply to reclaim plants stock pile.... Municipal governments will have increasingly hard time financing their operations. Many sources of local taxation are drying up. State revenues from motor fuel and motor vehicle taxes are already slumping.... Employees of the Office of Censorship have adopted as their motto, "OH, SEE CAN YOU SAY?".... We predicted last month that Mr. Roosevelt was on the verge of naming a Coordinator of Rubber with authority to end the confusion. We slipped—at least on the time element.... Retail sales volume is going down; even dollar volume is slipping. That's all right with O.P.A.... You'll be wise to give the cold shoulder to rumors that American war machines are inferior.

It makes a
WHALE *of a difference*
to a **SARDINE**



PERHAPS you've never heard of "striking" a sardine? It's what Down Easterns call the process of salting their catch . . . right out there in the dories, bobbing in the ground swell.

For when removed from the briny deep . . . the sardine must be put immediately into a stronger, perfectly balanced brine to preserve his meat and delicate flavor during the run back to port.

Without this *salting* . . . a sardine would never be able to enter his Valhalla—the tin on your pantry shelf!

And if asked, those cautious-tongued fishermen will even tell you the difference in the salts of the earth. They'll tell you that International's Sterling Rock Salt proves infinitely superior for "striking" . . .

that its *purity*—its *uniformity*—eliminates spoilage.

These simple and hardy fisherfolk join with big industry in acknowledging the vital part that salt or salt processes by International play in their work. International is a synonym for salt in glass-making, tanning and dyeing . . . in meat-packing, stock feeding and agriculture. Sterling "Auger-Action" Rock Salt also serves in keeping the highways . . . and air-field runways . . . free and clear of snow and ice!

Would you like to learn more about salt? Just let us know where we can send you the facts contained in the booklet, "*Salt by International*." International Salt Co., Inc., Scranton, Pa. Rock salt, evaporated salt, lixate brine, salt tablets, Sterling table salt—for industry, agriculture, the home.



AMERICA'S

web of air protection

Two years ago, England's flying men saved their country from invasion. The R. A. F. was able to maintain superiority in the air because factories on the ground continued their all-out production . . . beneath a protective web of barrage balloons, which kept enemy bombers too high for destructive accuracy.

Our government then took steps to provide similar protection to our industries and our military objectives . . . assigning the task of building barrage balloons to The General Tire & Rubber Company.

Starting from "scratch" . . . in a totally new endeavor . . . General's balloon plant is now working twenty-four hours a day, seven days a week.

General's men, who have spent their lives in rubber, are deep in research, experiment and production also on numerous other war materials.

America has just so much rubber with which to win the war. Half of that rubber is now in use on *civilian* cars and trucks. It is up to *you*—and all of us—to make our irreplaceable tires last through to Victory. Our armed forces *must* get the rubber they

need. Our War Production Program *must* continue all-out. Tire abuse and neglect or excessive speed on the home-front cannot be permitted to waste a *single mile* of our precious rubber.

THE GENERAL TIRE & RUBBER CO. • Akron, Ohio

COPYRIGHT 1942, THE GENERAL TIRE & RUBBER CO., AKRON, OHIO





Birthplace for Air-Whales. Gigantic barrage balloons which look like whales-of-the-air, are made by General Tire in this huge room. At rear, balloon is being folded into shipping container; center, inflated balloon has passed final inspection; right, balloon is being deflated; foreground, assembled balloon awaits final fitting and inflation.

★



Fin Shaping Cords. Inside fin, workers check the ropes which give fin its shape and hold it together. Non-rigid, General balloons rely on these ropes as their "backbones."

★

Reinforcing the Fins. Double reinforcements are being put on the right fin of a completed General balloon. Every seam must be gas and air tight.

★



VICTORY WILL COME WITH THE RUBBER YOU SAVE

Lend-Lease in War and Peace

(Continued from page 26)

petroleum products and several million tons of iron and steel are among these items.

Agricultural aid, now 22 per cent of lend-lease, is a recognized factor in the strategy of war. Grains and cereal products lead the list. Meat and fish are second, then fruits and vegetables, milk products, eggs, sugar, poultry, cotton and so on.

How is lend-lease aid designated? The President established a Procuring Agency of five, representing the War Department, Navy Department, Maritime Commission, Treasury Department and Department of Agriculture. A lend-lease liaison officer, assigned to each country receiving aid, assists in drawing up requisitions which then go to Edward R. Stettinius, Jr., Lend-Lease Administrator. Items in the military category must be approved by the Munitions Assignment Board, made up of American and British Army and Navy representatives, before passing on to the proper division of the Procuring Agency which is responsible for producing the actual material and moving it to shipboard.

Lend-lease for freedom

ON February 23, our Government, through Acting Secretary of State Sumner Welles, and Great Britain, through Lord Halifax, signed an agreement which, in brief, committed lend-lease to the new and vital function of attaining the ideals set forth in the Atlantic Charter of President Roosevelt and Prime Minister Churchill. Similar "master agreements" have been signed with China and Russia, and all the United Nations will eventually be asked to subscribe to substantially identical ones. In brief, our Government pledges to use lend-lease benefits to establish certain freedoms among all nations. In his report to Congress on June 11, President Roosevelt dedicated lend-lease to the task of setting up a new economic pattern throughout the whole world after the war:

The United Nations have thus declared that they are more than a temporary military combination, and that they will wage the war together for a common victory and a common program of peace aims. . . . Our lend-lease program is one means, and a simple one, by which the common economic effort pledged in the declaration of the United Nations may be secured. The lend-lease principle, as it develops, is removing the possibility that considerations of finance can interfere with the full use of material resources.

This view of lend-lease raises several pertinent questions:

First, is this tremendous weapon to be used solely for winning the war or are excursions into dream worlds of social and political experimentation to be permitted to interfere with its military effectiveness?

Second, will American business be

protected against the exploitation of lend-lease aid after the war?

An immediate step toward this protection, in the opinion of Charles Bunn, State Department liaison officer for lend-lease, would be to establish three categories of lend-lease goods:

Types of goods in aid

CATEGORY A would include all those used up in the war effort: The ammunition shot away, the airplanes shot down, the ships sunk, the food eaten, the clothing worn and all the other military and non-military items that go into the ravenous belly of war. Also, the goods that have been captured, or destroyed to prevent capture, such as the airplanes still in their crates at Singapore, the stores lost on the Burma Road or at Tobruk. No use keeping books on materials that are used or lost.

Category B: Goods that could be returned. When the fighting stops, billions of dollars' worth of lend-lease items, some damaged, some in good condition, might be returned without impoverishing those who have used them in the war effort. Such goods could form a reservoir of defense materials for whatever future task of collective security this nation may undertake. Since the President has full authority over final disposition of such goods, no statement of policy relative to their return or disposition can now be made. But that disposition will have a vital effect upon American economy.

Category C is of even more concern to industry. Much of our lend-lease money is equipping airplane factories, landing fields, building sugar refineries, setting up manufacturing plants, repairing railroad engines and cars, and otherwise sustaining the industrial economy of other nations. Such things will increase permanently their industrial wealth. They should not be used to destroy post-war American enterprise in those countries or to restrict the mutual advantages of trade. Congress should take effective steps toward dealing with this problem.

It is not sufficient to say that the use of lend-lease in a post-war world is a matter of "foreign policy." Isolationism is dead. Some type of cooperative action among the nations is absolutely inevitable for the future, and the course of that cooperation will vitally affect the economic, social and political life of every person in this country for generations to come. The "master agreements" already signed or being signed commit the United States to certain things. Article VII of the agreement sets forth the aims post-war lend-lease is expected to attain. It reads:

In the final determination of the benefits to be provided to the United States by the government of the United Kingdom (or any other nation) in return for aid furnished under the Act of Congress of March 11, 1941, the terms and conditions thereof shall be such as not to

burden commerce between the two countries, but to promote mutually advantageous economic relations between them and the betterment of world-wide economic relations. To that end, they shall include provision for agreed action by the United States of America and the United Kingdom, open to participation by all other countries of like mind, directed to the expansion, by appropriate international and domestic measures, of production, employment, and the exchange and consumption of goods, which are the material foundations of the liberty and welfare of all peoples; to the elimination of all forms of discriminatory treatment in international commerce, and to the reduction of tariffs and other trade barriers. . . .

Who is to determine what will "burden commerce between the two countries?" Mr. Welles said, June 17:

This agreement also looks forward to the peace. The agreement reaffirms adherence to the Atlantic Charter, and the two Governments pledge themselves to cooperate with each other and all other nations of like mind in a concerted and determined effort to promote the betterment of world-wide economic relations.

Are such questions to be left to the diplomatic battle between two men, one representing us and one the neighbor nation, with the possibility that the foreign diplomat will outsmart ours? Who are countries of "like mind"? Are the vanquished nations, when sufficiently repentant, to be included? Are nations with totalitarian governments—in this hemisphere and in the Old World—to be aided regardless, or in proportion to the speed with which they embrace the Four Freedoms?

New economic system

ANSWERS to such specific questions, by lend-lease spokesmen, disclose that our policy now embraces the following:

Through continued use of lend-lease, other nations will be brought to accept "American economic principles." The Act itself, due to expire June 30, 1946, will be extended indefinitely.

Free trade is the basic principle in the new world economic system.

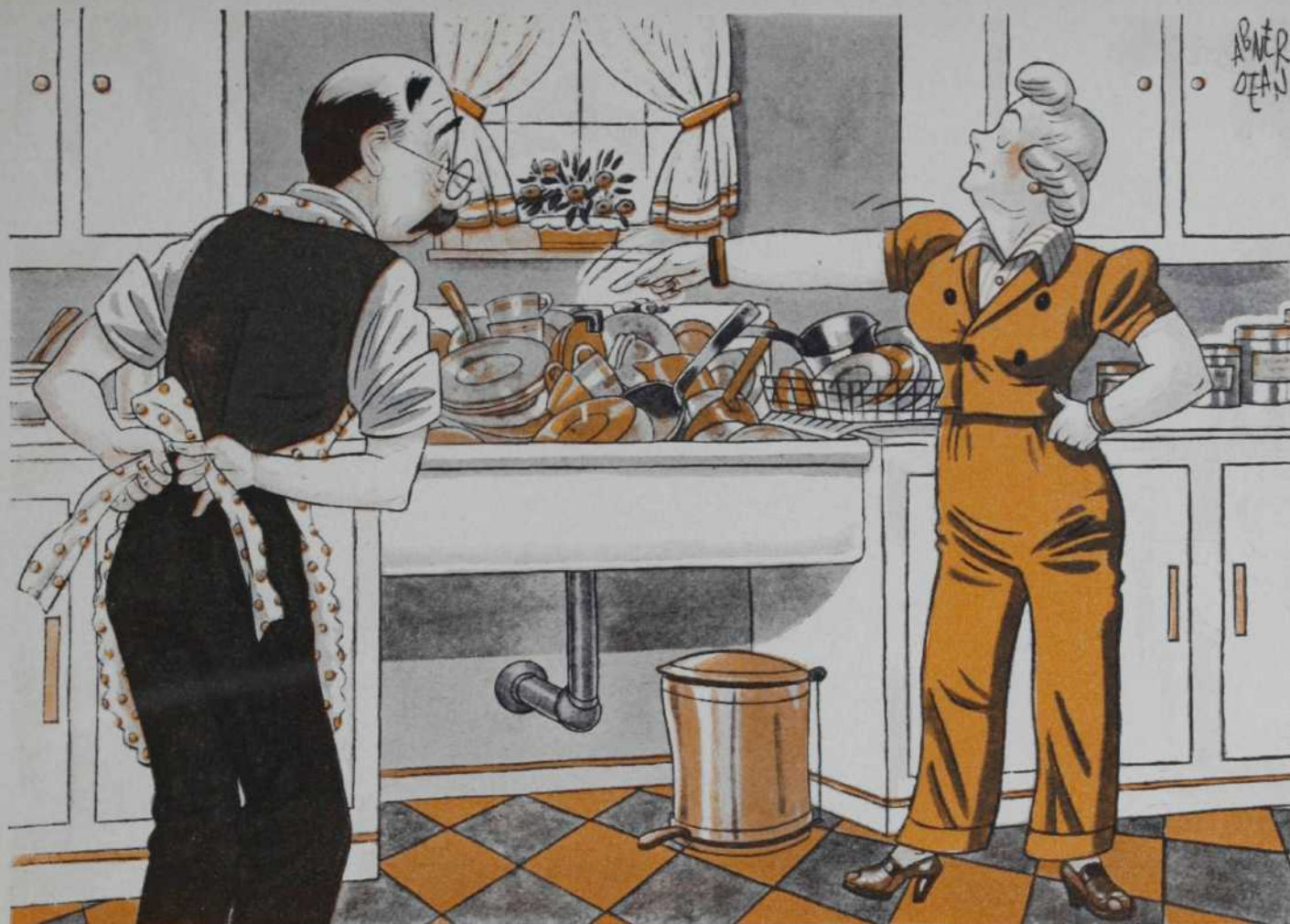
There will be no peace treaties for an indefinite period after victory. Agreements, requiring no ratification by the Senate, will be signed, to be effective during the reconstruction period.

American money and resources will reconstruct and rehabilitate the world.

A political association will be formed of the "like minded" nations, dominated and policed by the United States and Great Britain.

Are these policies premature, since our military battle is not yet won? Perhaps, but they have been formulated, and are being announced piecemeal. The most important obligation of American citizens is to weigh these policies, decide which they approve or disapprove, then express their will through those who in public office must finally make concrete their hopes for a better world.

The course of lend-lease will have a lasting effect upon our economic structure. The people must decide whether it shall be the weapon for permanent good or the tool for political experimentation.



who wears the pants in this family?

There's no doubt about it: Pants—traditional symbol of authority—have gone co-educational.

This trend is not without its serious significance. In homes where the men are away, women now face the responsibility of looking after the fire insurance on the house—automobile insurance—and other essential forms of protection.

To make shopping for insurance as simple as shopping for a pair of shoes, the Aetna Fire Group sells only through experienced local agents or brokers.

These representatives will be glad to look over your policies and make sure they meet present-day conditions. They can give you expert advice on how to obtain modern protection at small cost. They stand ready to tell you just what to do in event of loss.

Also comforting is the knowledge that when your insurance is with a capital stock company such as those comprising the Aetna Fire Group, it is backed by both a paid-in capital and surplus. You are never liable for assessment.

**Don't Guess About Insurance
—CONSULT YOUR LOCAL
AGENT OR BROKER**

Since 1819 through conflagrations, wars and financial depressions, no policyholder has ever suffered loss because of failure of the Aetna to meet its obligations.

WARS	CONFLAGRATIONS	DEPRESSIONS
1846	1835—New York City	1819
Mexican War	1845—New York City	1837
1861	1851—San Francisco	
Civil War	1866—Portland, Me.	1843
1898	1871—Chicago	1857
Spanish-American War	1872—Boston	
1917	1877—St. John, N.B.	1873
World War I	1889—Seattle; Spokane	1893
1941	1901—Jacksonville, Fla.	
World War 2	1904—Baltimore	1907
	1906—San Francisco	1921
	1908—Chelsea	
	1914—Salem	1929
	1941—Fall River	



The Aetna Fire Group

HARTFORD, CONNECTICUT

Aetna Insurance Co. • The World Fire & Marine Insurance Co. • The Century Indemnity Co. • Piedmont Fire Insurance Co. • Standard Insurance Co. of N. Y. • Standard Surety & Casualty Co. of N. Y.

Landmarks of business progress



IN 1642... the famous mathematician, Blaise Pascal, startled Paris with a machine capable of addition and subtraction.

Today

Among modern calculators Marchant sets new standards of speed and accuracy with

20 POINTS OF SUPERIORITY



Smoothly-flowing Mechanism

Because Marchant uses an exclusive system of continuously flowing dials, there is no stop and start, no shock and jar in its operation... Marchant's secret of long life and smooth performance.

Test this point yourself by holding your finger on a Marchant in action. You cannot feel any pounding or thumping because all intermittent mechanism has been eliminated. Instead, you sense only the rhythmic flow of the dials, quietly revolving with uninterrupted motion... your assurance of greater operating speeds and longer service with a Marchant.

Ask the Marchant Man today to explain the advantages of the other 19 points.



Marchant Calculating Machine Company
Home Office: Oakland, California, U. S. A.
SALES AGENCIES AND MANUFACTURER'S
SERVICE STATIONS GIVE SERVICE EVERYWHERE

Is He Lazy or a Genius?

(Continued from page 28)

sons do, "Which is best to have? Which should I try to eliminate?"

The answer is, "None—everybody has them all in some degree, they make up temperament. Utilize those in which you are strongest."

These are the building blocks with which each of us constructs his disposition, and we can understand temperament better when we know something about the pattern each of us has built.

We are all likely to have temperamental "sets," strongly influenced by our habit-making tendencies.

Our habits modify our original nature into our temperaments, or our ability to get along with people, and do useful work in the world.

Our habits, or traits, tend to form groups. If you are highly excitable, you are also likely to be highly emotional, or overactive, and may find it hard to concentrate.

Shy and self-centered

OR, IF you are shy, you are also likely to be self-centered, not as practical as you might be, and will have odd ways of doing things, mannerisms. Steinmetz felt that he must smoke when he worked—a mannerism.

The ability to understand human nature has been sought for ages.

This temperament scale has been valuable in showing what building blocks to look for if you want to hire a salesman, a foreman, a private secretary or a research investigator. We are able to test people, plot a curve, and advise an employer that a given person has good qualities for a given job.

Day-dreamers are strongest in either the Schizoid or Epileptoid components.

The basis of the Schizoid temperament is a heightened imagination, an inner life so vivid that it is often confused with reality. This inner life may be in conflict with everyday affairs and people, and cause shyness.

The basis of the Epileptoid temperament is the urge to do things, starting with ideas that may come almost as revelations, which are adopted as projects. The strong Epileptoid loves detail, works patiently at his project, step by step, is usually cheerful.

This patient persistence in the Epileptoid is not common among people, generally, and the Schizoid's imagination is even less common. When found, they may be of great importance, but they go with the day-dreaming temperament in many cases, and an employer should accept them as hidden jewels, or undeveloped abilities, and give them every chance to mature and find their place.

The commonest temperament disclosed by hundreds of thousands of tests is the Normal Manic, a perfect contrast for the day-dreamer, because he is happy-go-lucky, ready for anything, optimistic, self-confident, versatile, adaptable, a mixer, emotional in his thinking, distractible, impatient, sometimes

overbearing. In a word, he is "Mr. Average Citizen," and just the opposite of the day-dreamer. In the vast armies of business, the Normal Manic predominates. He makes up the rank and file, and the world needs him by regiments and army corps.

But if business could find, hire, and properly place, where it can grow, about one day-dreamer to 1,000 Normal Manics, it would have a good temperamental combination.

Day-dreamers are needed because business tends to get too much absorbed in organization and standardization. These are excellent techniques, and indispensable in making and distributing commodities, but even systems grow by improvements, and the day-dreamers are the improvers.

Business should be able to recognize the constructive day-dreamer if it gives him opportunities to reveal his temperament, because he is almost invariably an objective thinker.

A Los Angeles manufacturer hired a sleepy boy, to oblige a friend, and tried him on various kinds of work without results. The boy seemed to be lazy. On one job, he contrived a way of lying down to work, and so was sent to a distant branch plant.

"I got tired of seeing him around," his employer said.

Planned for better working

SEVERAL months later, when the manager of that branch went on his vacation, he advised that the sleepy boy be given charge during his own absence. He had proved to be a social day-dreamer, watching people at work, planning different human combinations. Several of his suggestions had been adopted, with improvement, and, while he was in charge during the manager's absence, he made other transfers and combinations that stepped up defense production. As a worker himself, he was a complete failure.

When you first encounter the day-dreamer, he is generally "queer." His inner life leads him to avoid people.

But when you find a business that is progressive, with new products, and methods, and good employee relations, be it large, or small, you will generally find one or more day-dreamers in the organization—and along with them, an executive or an employer who is hospitable to the type.

One man in authority, hospitable to this temperament, can infuse great vitality into a business. He will enjoy the day-dreamer, be patient while the "queer" fellow is making connections with the practical world, be undiscouraged by failures, and be ever confident that the discovery of the real article will be worth all the pains taken.

He knows that, when he finds the real thing and helps it develop, he will have something with great possibilities.

He also knows that results cannot be guaranteed.



Washington's "Route of Empire" becomes A THOROUGHFARE TO VICTORY!



With rapt vision, the young George Washington peered into the wilderness...and beheld a mighty nation yet unborn. He saw that wilderness as "the channel of commerce to the extensive and valuable trade of a rising empire." The key to the empire, he knew, was *transportation*.

Slowly it began, moving along canals and turnpikes. Then came the railroad... turning Washington's wilderness into the important industrial area known today as *The Chessie Corridor*. Here is a limitless storehouse of coal... great deposits of limestone... petroleum... natural gas.

Today great industries along the Chesapeake

and Ohio rails work ceaselessly for America's victory. Here is an ideal combination of raw materials, low-cost power, nearby markets and excellent transportation. That's why the executive who plans today's war activities—or tomorrow's success in a world at peace—should know *The Chessie Corridor's* many advantages.

HERE ARE THE FACTS—in a 56-page book, "The Chessie Corridor... Industry's Next Great Expansion Area." Copies will be sent to executives requesting them from Industrial Development Service, Chesapeake and Ohio Lines, Huntington, W. Va.



THE CHESSIE CORRIDOR, Served by
CHESAPEAKE AND OHIO LINES
 Geared to the ^{war} **GO** of America!

Serving WASHINGTON • NORFOLK • NEWPORT NEWS • RICHMOND • VA. HOT SPRINGS • WHITE SULPHUR SPRINGS
 CHARLESTON • HUNTINGTON • ASHLAND • LEXINGTON • LOUISVILLE • CINCINNATI • COLUMBUS • TOLEDO • CHICAGO

No Business

Can Escape Change...

BUSINESS IS learning to make essential civilian goods from less critical materials

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

1 • A NEW preserver for paint brushes is designed so that brushes may be hung in a paint solvent or oil in individual compartments. A wringer attachment in one end extracts surplus paint or preserving fluid.

2 • FOR PLACES a regular drill can't reach flexible shafts are made with the chucks set at 45 or 90 degree angles to permit drilling within a quarter-inch of angle corners. With the power unit out of the way, the drill itself becomes a one-hand tool.

3 • A NEW window pane for industrial plants and other uses exposed to possible explosions is made of a wire screen sandwiched between two sheets of a transparent plastic. When it breaks it causes no flying glass.

4 • FOR PATCHING holes in screens there is a screen patch with the edges so shaped that they can be easily snapped into position and then leave no exposed rough edges. The patch can be applied with the screen in place and others may be added by its side for long slits.

5 • A FREEZING unit giving temperatures down to 120 degrees below zero is now available for industrial use in fitting of small parts by contraction as well as subzero tempering and stabilization of high speed tool steel.

6 • A NEW type of glass floats like cork, will not absorb water. It weighs only ten pounds per cubic foot and has a structure of many airtight cells which also add to its insulating properties. It can be sawed or drilled with ordinary tools. It can replace cork, balsa in life preservers and the like and in the low-temperature insulation field.

7 • PAPER BAGS that hold 40 pounds of dry sand for incendiary bombs are now made. Sealed against moisture, they will withstand ordinary handling but will burst when dropped from a height of three feet or more. In use the unopened bag is dropped onto the bomb or beside it.

8 • A NEW pump to be used instead of the stirrup pump in fighting incendiary fires is made without brass and other critical materials. The pump itself is wood and fabric and the hose is fabric. The handle action is said to be less fatiguing than the stirrup pump.

9 • A NEW paint product primes, seals and finishes any interior surface in one coat. Formulated for industrial, institutional and commercial properties, it has exceptionally high hiding power, is self-leveling, sets within two hours, dries to a flat finish. Made in white only, it may be tinted with alkali-resistant colors in oil.

10 • FOR INDUSTRIAL lubrication, portable service stations are now made which can be moved on hand or electric trucks to the machines for lubrication with the smallest time

out for maintenance. High pressure and low pressure pumps, also hand guns are included. Space for maintenance tools, waste, and the like is included.

11 • A NEW compound to prevent particles of weld spatter from attaching themselves to the area around the weld is applied with a brush. It is a creamy liquid which does not dry on the work, is soluble in water, does not evaporate or give off fumes.

12 • FOR FIREFIGHTING there is a new spray nozzle which goes from the shut-off position to a spray of 40 degrees. It can be opened up to a full curtain of 150 degrees and back to shut-off without an intervening straight stream. It will cool and protect buildings, knock down heavy smoke, and dissipate fumes.

13 • A PHENOLIC plastic of very high impact strength for pulley wheels, casters, rollers, and the like has been developed. It has a macerated fabric filler.

14 • ACCESSORIES FOR lawn and garden hose—nozzles, couplings, sprinklers—are now made of plastic instead of brass. They won't rust and will stand hard service.

15 • A NOVEL electrical device has been developed which can be used to concentrate metallic ores from low-grade ore samples. A one and a half per cent tin ore can be concentrated to a 70 per cent ore suitable for smelting. Other ores, some materials other than ore, can be separated by the same machine.

16 • A SMALL register for making triplicate handwritten records weighs only 4¼ pounds loaded, is made of plastic, can be held in the hand for writing. It has a pinwheel feed which keeps forms accurately aligned. Pulling a knob ejects a set of forms when written.

17 • A PLASTIC strip is now made which is used as an edging around a window frame and acts as a track for black-out shades preventing light from escaping around the edges. It does not mar decorative effects in homes, may also be used in industrial plants.

18 • A NEW variable speed transmission has a built-in chain reducer and the output shaft is in exact alignment with the input shaft. Output speed is infinitely variable within predetermined limits by turning the speed control handwheel.

19 • AN ADAPTER made for paint spray guns makes possible the use of the paint can as a spray gun cup. Changing colors or paint requires only a change of the can, not washing the cup.



20 • A NEW general utility electric lantern has an adjustable focal length and a small light bulb on an extension cord for special uses. It is in a plastic housing that's lightweight and virtually unbreakable. It is available in red, black, and olive drab.

—W. L. HAMMER

EDITOR'S NOTE—This material is gathered from the many sources to which NATION'S BUSINESS has access and from the flow of business news into our offices in Washington. Further information on any of these items can be had by writing us.

Packaging Can Take It

(Continued from page 52)

roll up twine and even rescue tissues.

The Interstate Commerce Commission now permits lighter weight containers in railroad shipments; the anticipated savings are reckoned at ten per cent. In practical terms this means, for one thing, that, if you continue to see displays on counters and in windows, they'll be skeletonized forms which can be used inside and out—and maybe reversed from top to bottom.

One of the country's biggest "wrapper-uppers," the Western Electric Company, hopes to save 1,500 tons of cardboard, by using corrugated caps, instead of whole boxes, over the top and bottom of its shipped telephone booths this year.

Less paper for packages

EVERYWHERE the slogan is "more packages from less paper." W. C. Ritchie & Company, with a shrewd eye on post-war customers, offers a free service in re-designing. They state frankly that they cannot take care of new customers now but they offer to help any manufacturer reduce his package paper content by as much as 30 per cent. Re-designing is bound to affect the looks, if not the usefulness of the container, and in the immediate future, advertising policies.

Proposed bulk packaging of certain food staples will have some effect on advertising; so will plans for more dehydration and freezing of foods. Since a carload of quick-frozen spinach equals almost ten carloads of the fresh vegetable, storage and freight charges enter into the advertising copy, too, while retention of glass jars for home canning is already creeping into newspaper ads.

In the long run the revolution in the package industry, though forced, is by no means an unmixed evil. Rummage around in any retail store and you'll find a number of packages which have outlived their shelf-life. Packaging is undergoing multitudinous changes, ranging from wooden caps instead of metal ones on cold cream jars, to glassine for medicine bottle wrapping instead of paper cartons. It is also undergoing terrific strains.

Recently Navy flyers deliberately dropped two packages from an airplane; one fell from a height of several hundred feet on to hard ground. The other went into the Delaware River. Each contained not only delicate instruments, but distilled water in glass bottles and precious blood-plasma, fluid intended for distribution by plane to disaster-stricken areas or isolated units of the Army and Navy.

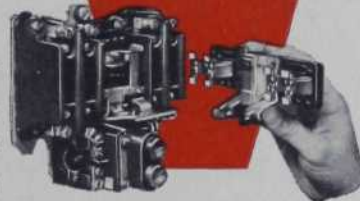
When government and medical authorities rushed from Red Cross ambulances to make the inspection of the contents of both, the metal-edged paper bundles were found to be unharmed.

Packaging may be tightening in its belt, but the industry can take it.



How a simple but effective idea contributes directly to America's all-out drive for security

A problem of Motor Control performance which has become ever more important with



saved maintenance time and money. Important as these contributions have been in the past

each increase in the use of electric power by America's factories, was solved in a simple way many years ago by Cutler-Hammer engineers. They designed Motor Control contacts to operate in a vertical position so that dirt and grime could not collect on the contacts and interfere with their proper performance. This simple solution made motorized machines more dependable, avoided delays,

to American industry, they assume critical proportions as America mobilizes her factories for all-out war production. No man need be told that dirty, sticky contacts mean trouble or that minutes gained, interruptions prevented, will count heavily in the days ahead. And the way to get Cutler-Hammer self-cleaning, dust safe vertical contacts is to insist upon Cutler-Hammer Vertical Contact Motor Control. CUTLER-HAMMER, Inc., 1251 St. Paul Avenue, Milwaukee, Wisconsin. Associate: Canadian Cutler-Hammer, Ltd., Toronto, Ontario.

Copyright, 1942, Cutler-Hammer, Inc.



Cutler-Hammer Vertical Contacts are the mark of better Motor Control, another extra dividend on Cutler-Hammer's unequalled specialized experience and decades of Motor Control leadership.



1892—1942 50TH ANNIVERSARY



WE'RE IN A WAR; a fact that is being brought home to us in many ways. No longer can we enjoy all the privileges to which we have become accustomed. Johnny can't use the car. Mother can't bake so many cakes.

Place the blame squarely where it belongs—in Berlin. The shadow that has darkened so much of the world has touched our shores. It *could* lengthen still farther; could bar our freedom of speech, press and worship; yes, even our right to travel when and where we choose. We can't let that happen.

What are we doing about it? Ask any Union Pacific man. He'll tell you that he and thousands of other American railroad workers are exerting every effort to stop that creeping shadow; that they are doing a tremendous job of transporting armament and munitions as fast as our factories can turn them out . . . of transporting troops in ever-increasing numbers. It's a job that must be done so that we Americans may always feel free to go wherever we please, unquestioned and without fear.



The Progressive
UNION PACIFIC RAILROAD
The Strategic Middle Route

Keep the Retail Doors Open

(Continued from page 56)

but keep its hardware identity." Drug-gists are among the few not concerned about obtaining new items to replace those they have lost by reason of war production. They had too many, anyway.

A South Bend, Ind., washing machine dealer bought a carload of horses and exhibited them for sale in stables he had built in the rear of his store. Competition in this field is said to be negligible, but supplies are limited.

Expansion of service is generally regarded as more promising than alternate merchandise. So highly does the Electric Vacuum Cleaner Company rate service in wartime merchandising that it is emphasizing to its dealers a complete electrical appliance service on all appliances and all brands, even competing equipment.

Dodge Brothers started a "Pay-as-You-Drive" budget service program for Dodge owners, supplemented by "Idea Exchange" bulletins filled with tried and proved suggestions picked up by field men. These two dealer aids contributed much to the fact, as reported by Vice President Akers, that a high percentage of Dodge dealers had a profit the first half of the year.

Many dealers bid for service

THE Bendix people say they undertook to convert sales-minded distributors to a service-minded attitude, and that the plan is succeeding. All over the land families have appliances, vehicles, implements now considered essential to modern living which they will not be able to replace until after the war. Keeping them in good running order is a highly important job and one that may keep many a retailer in business.

That is the object of Williams Oil-O-Matic Heating Corporation's Victory Service Program. Dealers are encouraged to take on the sale of unrestricted items related to heating and cooking, plus the maintenance of equipment now in use. They are making a house-to-house home survey in their territories, intended to reveal better heating needs in roof and side wall insulation, storm doors and windows, weather stripping, draft regulators, furnace or boiler cleaning and repairs, adjustments in automatic firing devices, etc.

General Electric has inaugurated a large-scale service training program for its dealers, to consist of a series of short courses for repair men. The first series, on refrigerators, was held in 74 key cities all over the country.

But there is one serious catch in service as a substitute for sales revenue. That is the man power situation. Men with mechanical ability are rapidly being siphoned into the war industries, unless they are called to the colors.

"Most of our dealers are having a difficult time maintaining their pre-war

service organizations, much less increasing them for the purpose of handling additional customers," writes Frank Friemann, Vice President of the Magnavox Company. Mr. Friemann adds that Magnavox dealers—the larger music houses and department stores—are not pinched by war as the specialty shops handling a less diversified line of merchandise. Most of the large music houses have a stock of musical instruments and quality radio-phonographs that will carry them along on a somewhat curtailed sales basis for a year or more.

Auto service curtailed

AUTOMOBILE service sales started off well early this year. For the first quarter of 1942 Oldsmobile dealers reported an increase of 64 per cent over 1941. Then came the fear of a rubber famine, followed by gasoline rationing in the East. Since then, with the waters muddied by vague official threats of tire and auto confiscation, sales of both service and used cars dropped off sharply.

And what of the middlemen who are a part of the distribution system—the wholesalers and jobbers?

War scarcities appear to have re-emphasized their function in the market place. More than ever the small retailer must stick closely to the wholesaler or jobber who will do what is possible to satisfy his needs.

Producers, too, are relying more than normally on middlemen.

"Many manufacturers are finding it increasingly difficult to maintain their force of detail men and salesmen, and as a result a good many orders which were formerly placed direct are now going through the wholesale house," says E. L. Newcomb, executive Vice President of the National Wholesale Druggists Association.

Rivers Peterson, managing director of the National Retail Hardware Association, believes that hardware wholesalers, by the vision they displayed in advance buying before the war, made possible a great help to the small retailers in trying to get as much of the available merchandise as possible. In spite of this, he is of the opinion that the large operators (chain and mail order) got more than their share.

In one respect the position of the intermediate distributor of foods has changed decidedly. Paul Fishback, secretary of the National Food Broker's Association, says that food jobbers have always considered themselves as sales agents of the manufacturers. Now, they find they are becoming more nearly procurement agents for the retailers.

For many thousands of retailers and some distributors the distribution situation today is the primitive question of survival. For manufacturers it is keeping open those outlets that will permit their goods again to flow out to the ultimate buyers when civilian production resumes. War has shown the two how utterly they depend on each other. It must not be permitted to sever their bonds of wedlock. From what both partners are saying and doing to keep the retail fires burning, it *will* not.

HELPING BURROUGHS USERS MEET TODAY'S PROBLEMS WITH THEIR PRESENT EQUIPMENT

"We bought this machine a few years ago for posting our customers' accounts, but today, that is just a part-time job.



"So Burroughs showed us how we can also use this machine to post our material and cost records and write our complete payroll."

Under today's wartime conditions, Burroughs systems and installation men are rendering invaluable aid to Burroughs users by showing them how to make the fullest use of the equipment they now own . . . how to adapt their present machines to new conditions . . . how to make them last as long as possible. Can Burroughs be of help to you? Telephone the local Burroughs office, or, if more convenient, write to—

**BURROUGHS ADDING MACHINE COMPANY
DETROIT, MICHIGAN**

Burroughs

★ FOR VICTORY—BUY UNITED STATES WAR BONDS AND STAMPS ★



An Emergency Statement to Industrial Executives

Manufacturers—large and small—have a special opportunity to aid the war effort—over and beyond the contribution they are already making.

That opportunity is Salvage.

No matter how much scrap is dug out of the attics and basements of homes, the fence corners and gullies of farms, war production factories will still fall far short of the scrap material needed unless the manufacturers of America get 100 per cent behind the program.

Six million additional tons of scrap iron and steel alone, as well as vast quantities of rubber and other materials, are urgently required to bring our war program to full strength.

Whether you are a lace curtain manufacturer or a maker of drop forgings the obligation is the same.

The job is more than simply collecting scrap material around the plant, or turning in the scrap which is created on the premises. It is a job of condemning obsolete machinery, clearing out unusable stocks, obsolete tools, dies, drills, fixtures, etc.

All unusable material, equipment, and stocks should be scrapped at once and put back into war production.

The philosophy of "It may come in handy some day" must give way to the doctrine of "My country needs it now."

Patriotic volunteer committees of executives are already hard at work on this problem in 421 industrial centers.

The Industrial Section of the Conservation Division has a corps of technical advisers who are prepared to work with all types of industries.

A thoroughgoing Salvage program in a factory can not only help meet

the present emergency, but can help prepare that factory for its postwar operations through the elimination of once wasteful practices.

- 1 The first thing to do is to put some one individual in charge of Salvage in all departments of your business and give him not only the responsibility to act, but the authority to act.
- 2 The next thing to do is to get in touch with your local Industrial Salvage Committee and map out a detailed program with the materials and ideas that are available. Their program contains 17 simple steps.

If in any doubt, write or wire at once to the Conservation Division, War Production Board, Railroad Retirement Building, Washington, D. C.

This job is being tackled by a democratic nation through the volunteer efforts and initiative of democratically managed industrial concerns, rather than through directives or compulsion as it is done in Axis countries.

Every executive, every superintendent, every foreman and every worker in every plant can help.

The main thing is to get started now.



All unusable material, equipment, and stocks should be scrapped at once and put back into war production. Please read this message and act now.

D. M. Nelson

D. M. NELSON, CHAIRMAN, WAR PRODUCTION BOARD

This message approved by Conservation Division

WAR PRODUCTION BOARD

This advertisement paid for by the American Industries Salvage Committee (representing and with funds provided by a group of leading industrial concerns).

SCRAP FROM HOMES AND FARMS—As individuals, search your home from attic to basement. Search your garage. Look at the old familiar things in a new light. Do you need them—or can you get along without them? Your country needs every pound of scrap iron and steel, other metals, rubber, rags and burlap to provide the fighting materials our armed forces must have. Take your scrap to the nearest Salvage Depot—give it to a charity—or sell it to a Junk dealer. . . . If you live on a farm, consult your County War Board or your farm implement dealer. In any case, your scrap will flow back into the blood stream of our war production.

Farm Machines Fight for America

(Continued from page 36)

a very large per cent of the whole. For economic reasons the farmer prefers to wear out his old equipment. This is shown by the Census of 1940, which found that 35 per cent of the tractors on farms were ten years old or more.

In financing the farmer in his purchases, the manufacturer holds the notes in the central office or at a branch house. These are not sold to banks as other commercial paper. In case of crop failure or falling prices, the manufacturer suffers losses with the farmer by extending the life of the note. Sometimes it is necessary to extend it several years.

Farmers are inventors

IN developing new machinery the manufacturer and farmer again are partners. Most of the new inventions are by farmers with imagination, who learn by trial in the field what improvements are needed. Farmers invented the combine, corn picker, tractor, damming lister and a host of other machines. A goodly percentage of inventions also come from research work in agricultural colleges. The forage-harvester, for example, was perfected after 13 years of research at the University of Wisconsin.

The manufacturer generally buys the patent on a new invention either outright or on a royalty basis. Each year implement company engineers perfect crude machines that come to them from the inventors. For lack of such research engineers, the threshing machine and wheat drill invented by George Washington never were developed commercially. They were sound in principle, but cost too much to operate.

The tractor has undergone remarkable refinement in the laboratories of the implement companies and the improvement is yet progressing. Every year sees something better in tractors. Twenty years ago a tractor weighing 22,000 pounds could develop 60 horsepower on the flywheel but only 30 horsepower on the drawbar. In other words half the horsepower was spent merely in moving the machine. The tractor of 1942 that develops 30 horsepower on the drawbar need develop only 35 horsepower on the flywheel. Engineers have regeared the engine and refined the metal until a 30 horsepower tractor weighs only 5,400 pounds.

Tractors do many jobs

THE new tractor can serve on a diversified farm as well as on a one-crop farm. It can turn around in a kitchen, can be hitched to any field implement, can haul a train of wagons on the road and can operate feed grinders or a corn sheller in the barnyard. The speedy, new tractor, however, has made much old farm equipment obsolete. The mold board of a plow that works well at a speed of two and a quarter miles an hour must be streamlined if it is to work

at five miles an hour. Other machinery, too, must be rebuilt to harmonize with the greater speed.

Another tool perfected by the factory engineers to promote diversified farming is the new combine, brought out in 1941, which can harvest and thresh 100 different kinds of grain and grass seeds. And so, instead of working through the brief season of the wheat harvest, it is employed through all the harvests. The small combine is another development to benefit the diversified farmer. Before 1938, few combines could cut a swath as narrow as six feet. Last year 90 per cent of those sold would cut a swath six feet or less. Some have a cutting sickle only 40 inches long—cost \$400 delivered on a Kansas farm and less in Illinois, which is nearer the factory.

A revolutionary machine, first brought out commercially in 1941, is the forage-harvester, which sells for \$350 delivered in Kansas and is threatening to send the pitchfork, last surviving symbol of farm drudgery, to keep company with the flail and scythe. Drawn by tractor power, it mows green grass or green fodder in the field, chops it into silage and loads it on a rack. The tractor takes the rack to the barnyard where a blower snorts the green feed into the silo. Later the blower can blow the feed from the silo to the feeding rack. The forage-harvester also picks dry hay from the windrow and blows it into the barn without the use of a pitchfork.

Exposition of farm equipment

FARM equipment is continually improving. For the past 38 years the manufacturers have held a coming-out party for their new models at the Western Tractor and Power Farm Equipment Show held the last week in February at Wichita, Kan., which is an important machinery distributing center for the southwestern Great Plains. The Plains afford an ideal proving ground for new models and this area also is the center of new inventions.

A year ago 165 exhibitors, representing practically all the large manufacturers and some of the small ones, brought displays. So great was the show that it filled both floors of the block-long municipal exposition house, sprawled for four blocks down a street nicknamed Tractor Row and occupied the implement warehouses and sales rooms on both sides of the Row. Factory engineers came to inspect new designs produced by their rivals. Dealers from 15 or more states came to keep themselves posted. The Russian Government sent no representatives last year but it had done so in previous years, because Europe has nothing like America's big farm-equipment show.

No fan dancers or other side shows have ever been used to draw the farmers, who came to see nothing but machinery and motion pictures explaining

the machines. In the past six years the attendance has been from 150,000 to 175,000 men and women. Farm women are power-machinery fans, because the wife on a mechanized farm does not serve as laundress to her husband's hired man, nor does she slave in the kitchen for a gang of helpers at threshing time.

Making old machines last

AS THE new year comes, farmers are concerned over the limitation of materials allotted to the manufacturers by the O.P.M. During the autumn the farmers were busy writing their Congressmen about their need for machines. But their attitude changed with our entry into the war. Perhaps their view was expressed by C. C. Cogswell, master of the Kansas Grange, who for eight years has been one of America's most outspoken farmer-critics of the Administration's agricultural policies. Speaking at the annual meeting of the state grange two days after Japan's attack on Pearl Harbor, he declared that the Government should take all the metal it needs for tanks, ships and bombers. If any can be spared, he said it should go into implements, but only if it could be spared. Farmers are prepared to make their old machinery do.

The implement dealers have agreed with the farmers. Late in December they called off the 1942 Western Tractor and Power Farm Equipment Show to help win the war.

Even with curtailed manpower, even without new machinery, the American farmer is out to provide the cotton, calories and vitamins needed to win the war.

Received— But Not Read

(Continued from page 38)

much correspondence weakness. Failure to answer. Failure to answer completely. Failure even to read the letter to be answered carefully.

Was it Michelangelo who said, "Details make perfection, but perfection is no detail." Details make up business and they can be an awful nuisance—and they can be so important.

Everyday in my business I see orders lost, good will lost, time lost because of neglect and inadequately handled correspondence. I daresay some of our principals could read this article and say, "Oh! What he's writing there doesn't apply to us." But it does—to 11 out of 12 of them.

But that twelfth firm—ah! That's what makes me know it can be done. When the sales manager is away, an assistant answers. If we ask a dozen questions we get a dozen answers—pronto! Always by air mail. How that helps on letters that must cross a continent.

We do a lot of business for that twelfth principal that takes its correspondence seriously—it's our favorite firm. And the reason we do is because it makes it possible for us.

Give us Hard, Fast Work

For twenty-four years we have designed, built and equipped important factories.

Recently we finished a huge Government plant three months ahead of time, saving our customer a million dollars.

If you need help, we have adequate personnel. References on request.

**The H.K.
Ferguson
Co.**

**ENGINEERS AND BUILDERS
CLEVELAND • NEW YORK**





Cyclone Fence guards the plants that are arming America

THE threat of spies, saboteurs and other Axis agents is real—right now! Scores have been arrested. Others may still be loose—as well as ordinary thieves and marauders who always endanger industrial plants. But thousands of America's great factories, now turning out war goods, have prepared to meet these risks with America's best-known fence—U.S.S. Cyclone.

Cyclone Fence is almost impossible to climb, and any trouble-maker who might get inside finds it still harder to get out. Trouble-makers hate Cyclone—it's too tough for them—and it's on the job day and night. Cyclone is durable fence. Sturdy posts are set in con-

crete. Gates swing easily, but only at the control of your watchmen.

If you need fence, get in touch with us. We will help you choose the right fence—give you a free estimate. And, subject to priority restrictions, we'll do all we can to help you get the fence you need.

32-Page Book on Fence



Send for our free book that tells all about fence. Crammed full of facts, specifications and illustrations. Shows 14 types—for home, school, playground, and business. Buy no fence until you see what Cyclone has to offer.

CYCLONE FENCE
Waukegan, Ill., DEPT. 582

Please mail me, without obligation, a copy of "Your Fence—How to Choose It—How to Use It." I am interested in fencing: ☐ Industrial; ☐ Estate; ☐ Playground; ☐ Residence; ☐ School.

Approximately _____ feet.

Name _____

Address _____

City _____ State _____

They Thanked Him for Coming

(Continued from page 40)

tions. Each workman receives one-half the first year's savings from any idea he suggests. (They get about 50 new ideas every month, and find about one out of ten hits pay-dirt.) Some workmen have received as much as \$1,000 for a single new idea.

Came the world war. The company still was small, but it had not stood still. Welding was still in its infancy, and by hard study the tiny Lincoln Electric Company had carved out a large share of the country's welding business, partly because larger firms didn't want it.

The war gave welding its first big boost. You recall perhaps the interned German ships which were sabotaged in New York harbor by their crews. The propeller shafts and other parts of the machinery had been cut and broken to pieces. The broken parts were welded—mended right there in place, without ripping the ship apart and taking it to a shipyard. American industry was impressed. Lincoln was not in charge of this repairing job, but he contributed some things and learned some things.

No welded ships then

YOUNG and inexperienced though Lincoln was, he already had recommended welded ships to the Navy, and got the cold shoulder. He won't give you the Admiral's name; but the Government Printing Office will send you—for a small fee—the printed testimony which Mr. Lincoln gave on Wednesday, May 27, 1942, to the Naval Affairs investigating committee, and on page 923 you can read this:

MR. LINCOLN. In 1917 I went to the good admiral who was the head of the Emergency Fleet Corporation at that time, with a great deal of enthusiasm in connection with the welding of ships. That is the way they are made now. At that time I was younger and more enthusiastic than I am at the present time, and I told the good admiral that I thought we could weld ships and by so doing we would save a lot of time making better ships, and so forth. I remember that with a sneer on his face that got deeper and deeper, he finally said to me, "Lincoln, that is all nonsense. You can't weld ships. I would undertake to kick off with my foot any welding you could do."

And without waiting to rub it in, Lincoln went on briefly and convincingly:

I merely want to cite this, that from that time on until now the entire idea of building ships has changed from riveting to welding. Now, the reason that has changed is largely because of the fact that the Lincoln Electric Company has developed methods, techniques, and rods and machines which will do it.

The big days for welding—skyscrapers, automobile bodies, tanks, trailers, aircraft—were still in the unborn future. But the company kept plugging ahead. It has had its share of new inventions. Today it controls maybe 100 patents.

"But," says Mr. Lincoln, "we don't

CYCLONE FENCE DIVISION
(AMERICAN STEEL & WIRE COMPANY)

Waukegan, Ill. • Branches in Principal Cities
United States Steel Export Company, New York



**CYCLONE
FENCE**

UNITED STATES STEEL

rely on a patent to protect us against competition. Once you do that you are likely to become inefficient and lazy. We take out patents merely to make sure that no one will claim we are infringing on anyone else's patents."

In 1918 the company made a little money and, because the stockholders had never had a dividend before and didn't object, Lincoln gave half of it to the workmen. It was a small bonus, only about three per cent of their year's salary, and because this was the era of silk shirts the men didn't fuss over the gift much. Lincoln felt disappointed.

Pensions for old employees

THERE used to be some old men in the shop, grown old in the company's service, who inevitably made mistakes, spoiled stock, worked too slowly, and so set a bad example. Mr. Lincoln set up a pension fund. Since then any workman can quit at 60, and must take his pension at 65. Last year, when hiring many new workmen, some of whom the company fears it may not be able to keep in the slim reconstruction days to follow this war, Lincoln set up a retirement fund of \$1,000,000 from which these temporary workmen may be given a separation wage of six months' pay when and if they are let go.

Men don't willingly quit the company. Of 260 employees of ten years ago, 203 are still on the pay roll.

It was 1934 when the company again put into practice the idea of a bonus for workers. Mr. Lincoln had seen something of the amazing extra resources a man can throw into his job if his heart is in his work. The increase, he says, may be 20 or 30 times what he was formerly doing. He set up a bonus.

The results were startling—and can be proved. You take any company's yearly sales and divide it by the number of employees—which anyone can do from the U. S. Census figures—and get an average yearly productivity per employee, including workmen, foremen, supervisors, inspectors, laboratory, sales, purchasing, executive and office. Lincoln had some interesting figures from *Moody's Industrials* for 1941 ready to show the Naval Affairs investigating committee. They show that in 1931 an average Lincoln Electric factory hand was paid \$1,619 as against \$1,135 for the electrical machinery trade as a whole, and was producing \$6,107 in goods as against an average of \$5,524. In 1933 Lincoln Electric's average productivity per employee was \$8,371.

Then came the bonus. In 1935 each Lincoln Electric Company workman was producing a yearly average of \$10,963. In 1937 this figure was \$18,150. Right now Lincoln Electric's productivity average is more than \$24,000 per employee per year—\$25,025 for 1941, to be exact.

So that, says Lincoln, is where the company profits come from. Every time Lincoln Electric Company has increased wages or reduced prices some new saving or new earning has come along that surprised everybody.

Last year, for example, Lincoln Electric showed large earnings—before pay-

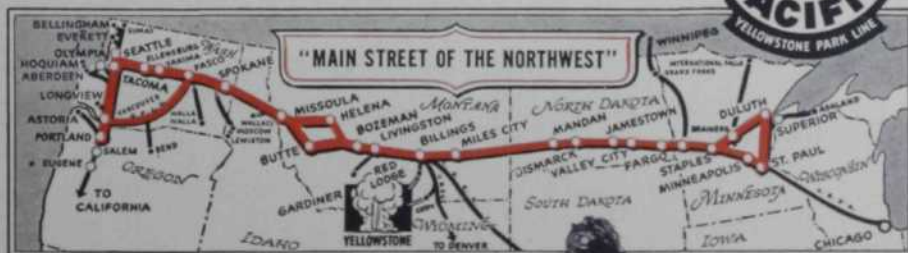


Count 20 and you've got a soldier

THIS KIND of sheep-counting should keep you awake!

The fleece of twenty, more or less, is what it takes to equip one soldier. Although we raise in this country much of the wool we normally need, a soldier or sailor requires *4 to 10 times as much new wool as a civilian*. Remember that, if you soon have to do without clothing or blankets made of virgin wool.

Because America is practically self-sufficient in new wool for our fighting forces, Northern Pacific may take some pride in the fact that it has always "talked sheep". From the grassy plains and mountain pastures along the "Main Street of the Northwest" comes over one-fifth of the nation's wool production—enough for half a million soldiers.



NORTHERN PACIFIC RAILWAY

To 65,131 Owners of General Foods Common Stock

Dividend* of 40 cents per share will be paid on no-par common stock August 15, 1942, to stockholders of record 3:00 P.M. July 27, 1942, without closing the transfer books.

J. S. Prescott, Secretary

*83rd Dividend

GENERAL FOODS

250 Park Avenue, New York City



Directory of WAR AGENCIES

THIS 54-page handbook lists:

- 75 War agencies
- 193 Sub-agencies
- 146 Industry advisory committees
- 582 Field offices throughout United States
- 2,564 Officials in charge of war activities

Single Copies—15 cents postpaid. Order from:

**War Service Division
Chamber of Commerce of
the United States**
Washington, D. C.

AIR

CONDITIONED

RATES FROM

THE Carlton \$5

16TH & K STREET
WASHINGTON, D. C.

ing its factory bonus and paying federal taxes. This is all the more surprising when you learn that nearly two-thirds of the company's business is in making and selling electrodes—the steel rods which are used up in the process of welding—at 4.8 cents a pound. Making these rods, some of them weighing only 24 to the pound and starting with pure steel costing three cents or better, is a feat of management.

He coats his electrodes with a whitish flux which vaporizes in the electric arc and releases quantities of hydrogen, which keeps the oxygen away, thus preventing the steel from oxidizing. Some of the chemicals in this mix cost as high as 20 cents a pound. Yet Lincoln holds to that shipped price of 4.8 cents. He even absorbed a 30 per cent increase in steel last year.

Mr. Lincoln is an optimist, although he is a realist about this war. Hard times are ahead; we will not easily win.

"We're not trying to win a war," he says. "The President says we must first conserve our social gains. That is not the way our enemies fight."

He sees no hope eventually for anyone preaching, "The less each man produces, the better it is for labor."

The idea should be to show each man that, when he produces all he can, the company he works for benefits, and he benefits along with the company.

Mr. Lincoln shares the optimism of his friend Kettering that the country has just started. There are so many things we don't yet know! And each new development leads to further surprises.

Welding has just started, he believes. He can visualize welded homes, built in sections and assembled in place with the welder's torch.

He sees no danger of production hitting the ceiling. His own company does not look on other makers of welding equipment as "competitors." The real competition is the other ways of making things.

Lincoln Electric has had no labor troubles. There is no union. Once upon a time a union organizer handed out leaflets at the factory door. There would be a mass meeting the next noon, he said, in the small outdoor park facing the factory. The meeting took place as scheduled. The speaker began his remarks. Suddenly from a nearby spot a workman started testing a gas-operated generator, with muffler removed. He shorted the machine and made his reading, keeping hands on the controls while he carefully studied the dials. Not a word was spoken. The orator blasted away, the workman tested the machine, and the audience laughed. Finally the speaker folded up his brief-case and drove away. He never came back.

The company management did not hear of the incident till days later. What had happened had been an act of policing from the workmen themselves.

James F. Lincoln is a church-goer. He says he firmly believes in the principles of Christ, as expressed in the Sermon on the Mount.

"The good Lord made men competitive and made them eager to work harder to their own benefit," he says. All his company does is to make use of these men's inborn ambition. He is continual-

ly surprised at the tremendous new energy which an enthusiastic man can unlock and use. A young engineer was promoted to be head of the development department. He came through with a new design for a vertical welder.

James F. Lincoln does not fear that bringing labor into an advisory position in management will take control out of management's hands. He asks advice and uses it; but the final decision is his. Labor doesn't want to manage, he says; labor is satisfied to do its work as long as it can respect and believe in those who do the managing.

His Monday committee meetings, still going strong after 28 years, help him run the company. He is still the boss.

"I do a risky thing," he says. "I tell these men, I'm the head of this company because I am the best man for the job, just as I think each of you is the best man for his job. If the time ever comes when I'm no longer the best, it's up to you to push me out and put a new man in this job."

Workers believe in company

HALF of the workmen are stockholders. They bought the stock at its usual price, usually paying by weekly deductions.

When Donald Nelson asked industry to set up new labor-management committees, Lincoln Electric Company did that, too. The Monday committee appointed this new committee.

Mr. Lincoln's factory associates gave him a new gold watch and a framed scroll a few weeks ago. He is almost naive in his enjoyment of it.

"Every man in the company contributed something toward it," he tells you happily.

Mr. Lincoln has made a lifelong practice of dodging magazine and newspaper interviews, which is quite a feat, considering he is president of the Cleveland Chamber of Commerce.

He and Mrs. Lincoln have four children—three daughters and a son, James F., Jr., now a demonstrator in welding; and eight grandchildren.

He has no desire to be rich. "Money is just a tool," he says.

He has made his success with just average people. A company ought to be able to create its own executives, he thinks. New employees come into the firm with only a routine questioning, although he sometimes thinks that aptitude tests and intelligence tests as used by some firms have merit.

He recognizes the absolute sincerity of men like LeTourneau who mix religion with their business, but he claims no sanctity for his own generosity to his fellow workmen. It is pure unadulterated far-sighted selfishness, he argues. His company continues to do what it does because that method pays.

So they called him down to Washington. "Do you have any statement," the chief investigator began, "that you would like to make?"

And Lincoln answered, "I should be delighted, sir."

For 28 years he had been building for this ordeal. And he met it with the fierce joy of conquest. Washington had never seen anything like him.



Make this label
your key to new
or conversion
lighting



For large plants or small

wherever fluorescent lighting
is needed to speed the job . . .
specify FLEUR-O-LIERS



Precision and speed are uppermost in this airplane engine plant. These sturdy 100-watt FLEUR-O-LIER units are helping to keep production in high gear.



FLEUR-O-LIERS provide even, shadow-free light in this fabrics shop helping to prevent cutting mistakes which would mean accidents and waste.

With War needs forcing plants to cram three days' work into one, the value of dependable fluorescent lighting is making itself more evident than ever. Whether it's in an office, drafting room or out in the shop, you can specify FLEUR-O-LIERS, and be sure of getting fixtures built for dependable service and maximum lighting performance. The FLEUR-O-LIER label is your key.

FLEUR-O-LIERS are made in various sizes and designs by over 45 leading fixture manufacturers located at important points all over the country. This means better service on war plant orders, for either new or conversion lighting.

FLEUR-O-LIERS are *tested* and *certified* by impartial Electrical Testing Laboratories of New York as meeting 50 definite Standards set up by MAZDA lamp manufacturers for balanced performance and satisfactory operation.

A vital tool in wartime production, fluorescent fixtures now require a suitable WPB priority rating. Any of the FLEUR-O-LIER Manufacturers, your electrical contractor, wholesaler or electric service company will be glad to work with you on this to get the best lighting possible.



Get this new booklet for full details and list of manufacturers. Write FLEUR-O-LIER MANUFACTURERS, 2116-8 Keith Building, Cleveland, Ohio.

FLEUR-O-LIERS

CERTIFIED FIXTURES FOR FLUORESCENT LIGHTING

Participation in the FLEUR-O-LIER MANUFACTURERS' program is open to any manufacturer who complies with FLEUR-O-LIER requirements

The Man Who Has Never Relaxed

(Continued from page 20)

sonal quarrels are the great business the day. . . .

This letter would indicate that people's unwillingness to work for the public good is not a new phenomenon. It has never been easy to induce people to work hard and unselfishly for improvement. It is no easier now, or more difficult.

In two respects, however, the torch of civic improvement has been dimmed as it has been passed from the perspiring hands of one George to another since 1776.

A vital factor in this dim-out has been George's less intimate association with government. In the early days of the republic George was the civic improver and, at the same time, the leader in government. This seemed to him natural and inevitable. In contrast, George today is a volunteer, a service club member, an economy league member and, occasionally, a stalwart figure in an active, short-lived reform or third party movement. But George shuns what he calls the "mire and filth of party politics."

A view of politicians

THERE seems to be a generally accepted differentiation between respectable people and those who run for political office. An example of that differentiation is the following excerpt from an editorial, with only the name of the candidate changed:

Berks County knows John Smith for what he is, and what he is is honest, candid, intelligent, sincere and aggressive.

John Smith is a politician, else he wouldn't be in a political campaign. But he is an enlightened politician, a square shooting politician, and a politician who is primarily attentive to the needs of the people and only secondarily to the demands of the party.

The editor was trying to be friendly. Yet he offered a gratuitous insult along with his pat on the back.

Today the civic club leader, the church man, or the leader of the rank and file in a trade union is viewed askance when he runs for political office. People assume that, for him to be elected, his conduct must be devious.

Until this view is changed, the George of the future will be weaker than his predecessors. Instead of being the respected person who presided at the town meeting, George, in too many instances, has become the supplicant at the door of city hall.

He works with the health division of his council of social agencies, and that work is hindered by the politician who is the city health officer. George tries to build character through his church and his scout troop. Within view of city hall,

gambling and prostitution tear down character.

Frequently the energy invested in grumbling about municipal government could be transmuted into action at the polls. If this transfer were continued over a period of years, the standard of municipal government could be raised and the term statesman substituted for that of politician.

If George is not to become the Vanished American, this is one step he may take. It will not be easy, but basically the problem is one of leadership, and that is George's specialty.

The results can be far-reaching. In his first political candidacy, Grover Cleveland was defeated by 13 votes for supervisor of the Second Ward in Buffalo.



An American tradition, he is one of the things we're fighting for, important, too

Coolidge began his trudge toward the presidency as a candidate for Mayor in Northampton, a town of about 17,000 population. Traffic, not weeds, is the problem on the road to Washington. One insurance for national statesmanship is a large group of local statesmen whom we constantly encourage to buck the traffic on that road.

The civic torch that George received from his forefathers has also been dimmed by the neon lights of the professional civic and welfare workers. In the old days, George had the ideas and he carried them out. Now he sits as a trustee, whether it be community chest, recreation board, or automobile club, and directs the work of the professionals he has employed. These professionals are necessary and beneficial in many instances.

It is obvious that a modern hospital cannot be staffed entirely by volunteers. The practice of psychiatry in a guidance clinic, the technical work in a baby welfare station, the day-to-day management of a hundred scout troops are jobs requiring paid workers. There is nothing intrinsically wrong in employing someone to do a necessary job.

The evil develops only when George begins to limit his participation to adopting blindly the opinions on program and necessity advanced by the professionals, and to raising the money. Obviously then, if the money runs out as it did in the depression, George ceases to be a factor. In that instance, the professional group that he had developed found another employer—the Government, with which George had little influence because he had already parted with his active citizenship there in order to keep out of politics.

More civic work

THERE is solid hope that the habits which thousands of persons are forming as wartime volunteers will not be lost when peace is won. One notable gain that can come from this war will be a revival of interest in regular, continuing peace-time civic work.

Another, gained through the many training courses that adults are taking, can be the realization that the George of the future must have special knowledge in addition to willingness.

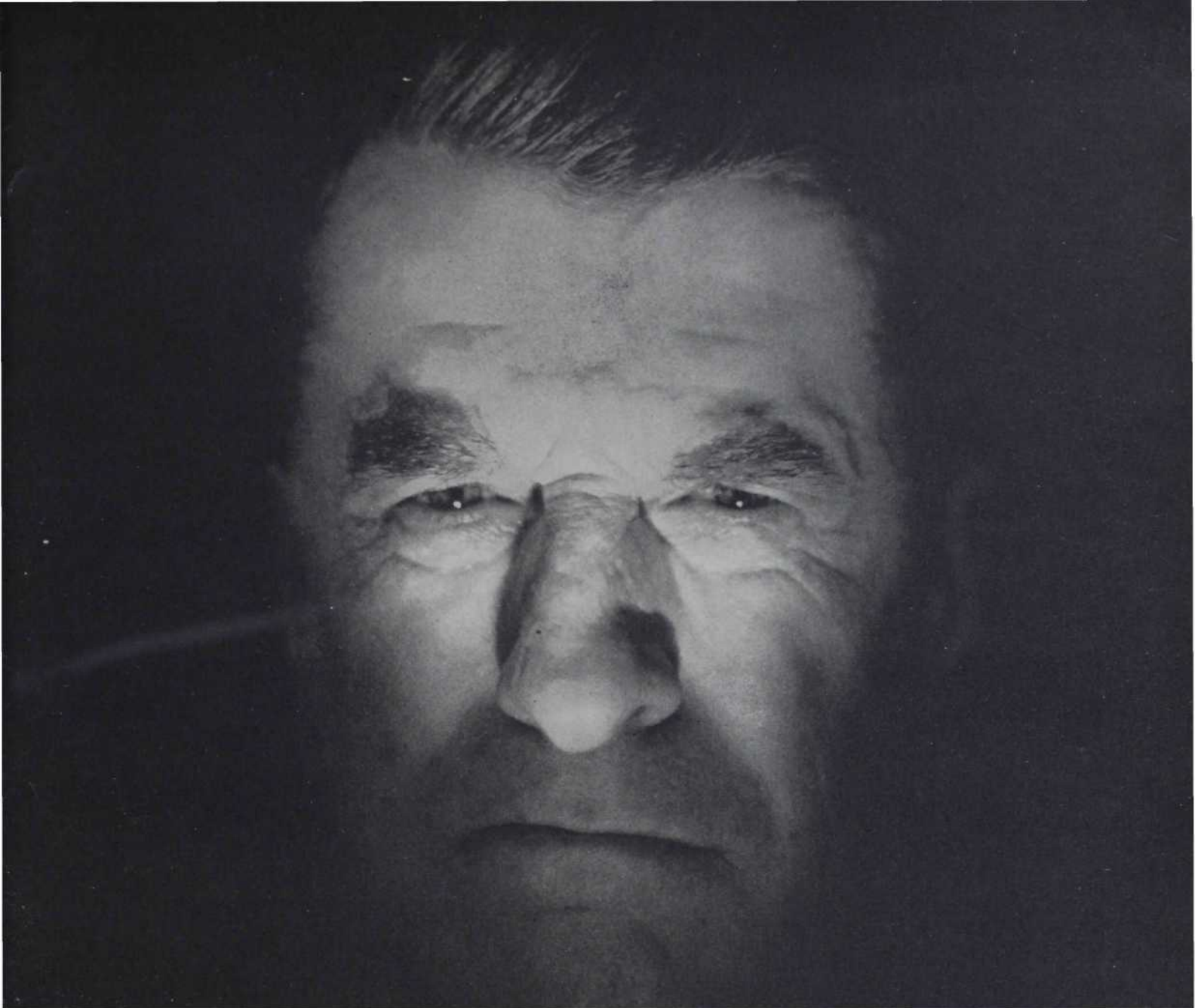
The remaining threat to the torch that George carries today is that it may be smothered beneath a mass of orders, edicts and pronouncements issued by a centralized Government. It is one thing to win a war through necessary centralization.

It would be another to look forward to a peace which would inaugurate even greater centralization.

The school that George started now operates on standards set in the state capitol. The private welfare agencies he organized are pigmies against the tremendous background of federal social security.

Some centralization is good and some is bad. The final decisions concerning it are made at the polls, where all the people the Government employs and all those it helps always vote. Those employed and those aided today combine enough votes to constitute a small political party.

George may be an industrialist who felt, until recently, that his wisest course was to contribute to all parties, so that



Watch Out for Tricky Eyes

EYES LIKE THESE can slip undetected into key spots in Allied war production.

They can botch the output of the best machines...ruin tons of good material...introduce errors on desks and drafting boards...slow down whole plants, whole industries.

Can, and do!

That's sabotage—not intentional, but sabotage just the same. The spirit is right but the eyes are traitors.

Faulty eyes play tricks. They strain, tire, blur and jump out of focus. Then things go wrong.

Nearly three-quarters of all Americans have defects of vision. Only a minority of these have taken advantage of the professional eye care which, in this country, is the finest in the world.

We have about 20,000,000 eye-faulty folks who are trying to squint and fumble their way through this war.

Are you among that number? Find out. Have your eyes looked at right away. And don't gamble on hurried, incompetent correction. Remember, you will never have another pair of eyes.

Go where you can be sure of the highly skilled, professional care that is available in every community. Take advantage of the precise individual analysis and fitting service to which your precious eyes are entitled. Keep your eyes tuned to the victory pitch. Better Vision Institute, Inc., 630 Fifth Avenue, New York.

VISION FOR VICTORY



all would be his friends. He may be a merchant who has believed that, since he sold to all political faiths, he should annoy no customer by having a political opinion of his own.

George may be a trade union leader who has ignored general governmental problems, holding closely to the policy of rewarding political friends who helped his union and annoying those who were its enemies.

Georges must watch government

TODAY, however, industrialist, merchant and trade unionist realize that a new game is being set up for post-war life in the United States. They are realizing, too, that a Government they have permitted to become a thing apart from themselves will hold a strong power in fixing the rules for that game. They are realizing that a Congress to be chosen at an election at which they will be largely spectators—at best voters for candidates in whose choosing they have had no part—is suddenly the most important thing in their lives.

George can control the course of centralization in post-war America if he is willing to make the necessary effort. The most potent argument for centralization lies in the failure of the local American community to do for itself. If the township doesn't, the county will. If the county can't, the state must. If the state won't, then there is Washington. And people dream of world empires because they see nations who can't, won't, or don't.

In each of these steps toward one cen-

tral power, there is gain but there is also loss.

The problem of bigness vs. home rule must be studied piecemeal, problem by problem. It is here that George, armed with knowledge and the willingness to work, can serve best.

Maybe, because he has a war to win, George feels that he is too busy to think of the future.

His thoughts may go to a George in France who has just wrecked a train, to a George in Norway who has defied the original Quisling, to a Chinese George who has organized a cooperative industry to provide war material for Chiang Kai-shek's army. Or he may think of the most spectacular of them all, Draja Mihailovitch, who, when Adolph Hitler announced that he had conquered Yugoslavia, organized a volunteer army that has since immobilized seven Nazi divisions.

There, in Yugoslavia, that George has created a blood-drenched island of liberty, a symbol for every fight for freedom, for the right of man to guide his own destiny.

Hard work preserves liberty

OUR George may not quickly identify himself with these heroes. He may feel that such kinship is reserved for those Americans who froze at Valley Forge, the Georges of George Washington's army.

Only sometimes, however, must liberty be preserved through fighting. Sometimes only hard work and attention to civic responsibility are needed.

The American Georges can preserve their liberties, and those of their fellow citizens, by winning the war. They are doing that now.

It is also in their hands to insure it for future generations.

Will George study and train now, or will he become just the willing worker lost in the intricacies of future civic, economic and government problems? Will he work to improve his own community, or will he wait for the government inspector to uncover faults and issue orders?

Will George continue to meet the obligation of having to make steady payments on liberty, or will he leave a land of strife and bitter argument to his children, with the possibility that they may have to fight for their liberty?

George is the product of generation after generation of independence. He has in him the same stuff that made for pioneering and a reckless disdain for danger.

He will not see his land become infested with bureaucrats, his liberties trimmed to suit the will of office-holders.

But how long will it take him to awake? He has just gone through one period in which he and his country suffered from the sin of being too late with too little.

As in war, these crimes carry heavy penalties in peace-time.

Retailers Point Way to Victory

THE NATION'S retailers were reported going over the top with a whoop in their drive to sell \$1,000,000,000 worth of war bonds and stamps in July. Enthusiasm ran high and hundreds of communities were exceeding their quotas.

More than 500 chambers of commerce were taking the leadership in the campaign, through their retailer divisions. Birmingham started off with a "Victory Breakfast" at which approximately \$2,000,000 sales were pledged. The breakfast idea, conceived by Harold Blach, chairman of the retail division of the Birmingham Chamber, was taken up by the Treasury at Washington and Mr. Blach was named to head up a national chain of Victory Breakfasts.

Advertising bonds and stamps

DETROIT retailers got off to a terrific start by advertising for one day nothing else but war bonds and stamps. No item of merchandise was so much as mentioned in newspaper displays, although liberal space was used.

The retail division of the Scottsbluff, Neb., Chamber inaugurated the drive in unique fashion. Planes of the Scottsbluff civil air patrol took to the air and "bombed" the city with small cardboard replicas of aerial bombs. A local newspaper said that Scottsbluff was answering the charge by certain New Yorkers that the West is "complacent" about the war.

TO THE NATION'S BUSY BUSINESS MEN

- **WE ALSO SERVE...** by making the New York stay of the Nation's business men as effortless and relaxing as possible.

Your room or suite overlooking the refreshing greenery of Central Park. Famous Sherry Netherland cuisine. Meals served in your rooms or in the intimate, high-ceiled restaurant. Deft service, that relieves you of every care.

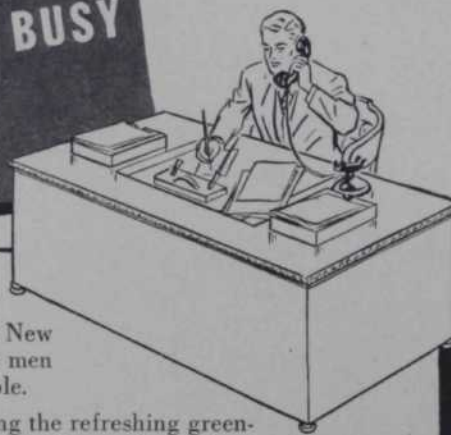
- **NO WONDER** this hotel is the choice of many of the nation's most important business men.

TRANSIENT RATES: from \$7.00 single, \$9.00 double, \$15 suites. 25% discount on rooms, for all members of the U.S. armed forces.

FOR VICTORY: BUY WAR BONDS

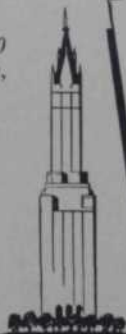
The SHERRY NETHERLAND

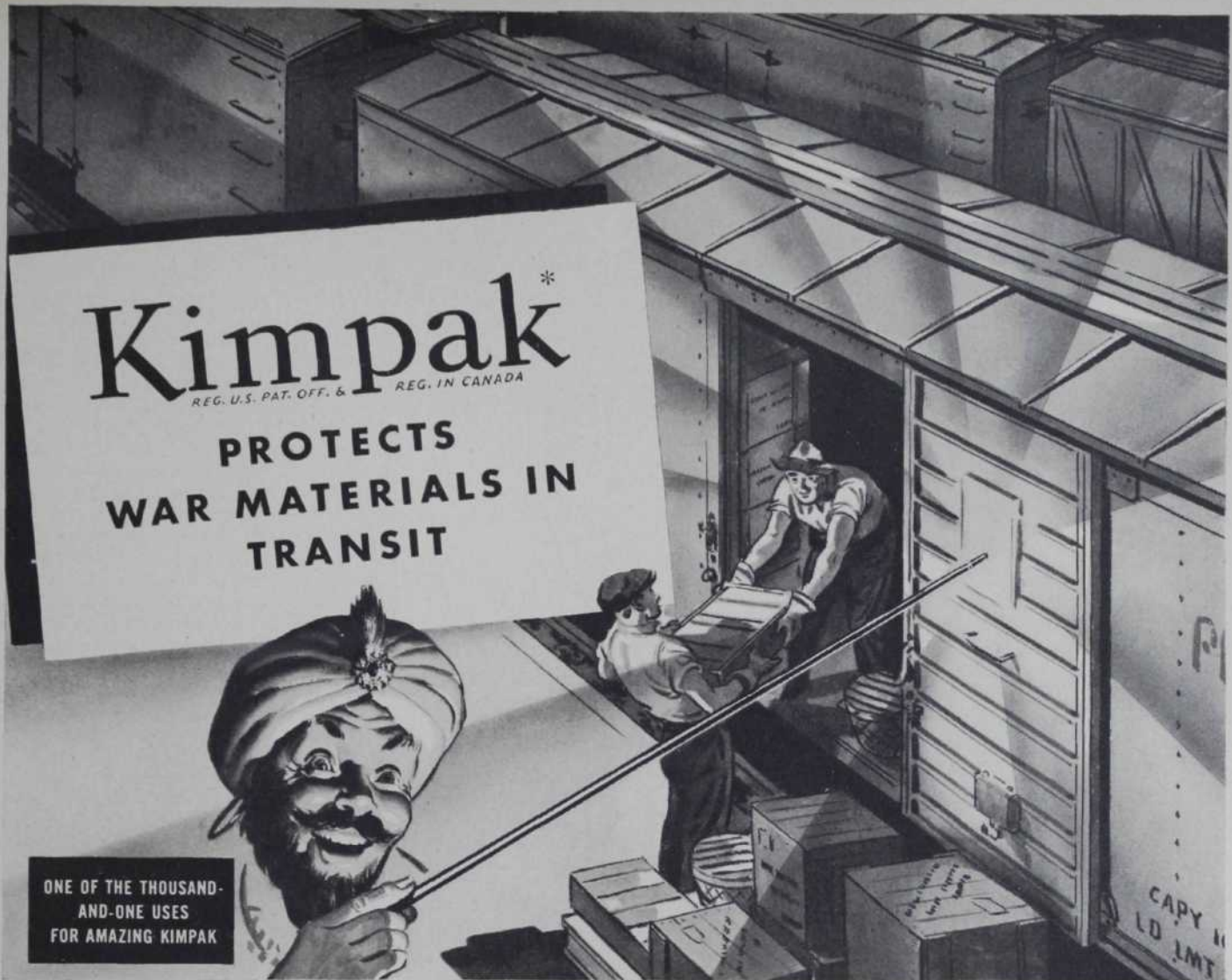
"Where the Park Begins" Eugene Volt, Manager
Fifth Avenue at 59th Street, New York, N. Y.



\$ AND SENSE

Company Treasurers Take Notice: Ask for details of the Sherry Netherland "Company Plan" if your executives frequently visit New York. Suites on short-term lease basis are most reasonable. Write for folder CP-2.





Kimpak*
REG. U.S. PAT. OFF. & REG. IN CANADA

**PROTECTS
WAR MATERIALS IN
TRANSIT**

ONE OF THE THOUSAND-
AND-ONE USES
FOR AMAZING KIMPAK

★ The astonishingly adaptable material KIMPAK* provides packing protection and thermal insulation for materials of war in transit.

For protecting arms, ammunition, airplane parts, war products of wood, metal and glass, KIMPAK comes in a wide variety of specifications, thicknesses and sizes to fit specific packing protection jobs.

For thermal insulation, KIMPAK is used in airplanes, refrigerator cars, trucks, trailers and motor busses. KIMPAK combats heat and cold without breaking down under severe vibration.

Let KIMPAK Help You

KIMPAK possesses many of the qualities of felt materials, is used for packing protection of light or heavy products in shipping, handling and storage; for acoustical treatment, vibration deadening and thermal insulation.

If you demand dependable packing protection for

*KIMPAK (trade-mark) means Kimberly-Clark Wadding.

products made of glass, plastic, wood or metal . . . if you're concerned about the safe delivery of tiny bearings or huge airplane wings, KIMPAK can help you and can do so at low cost.

Perhaps you need an efficient thermal acoustical insulation for your product, or you may need a material that filters gases and liquids or rapidly absorbs moisture. KIMPAK is meeting these needs for hundreds of manufacturers. KIMPAK is available for immediate delivery. Call, write or wire for fast attention:



NB-842
KIMBERLY-CLARK CORPORATION
(Established 1872) Neenah, Wisconsin
Send FREE copy of story of KIMPAK to

Company.....

Address.....

Attention of.....

A Full Abundance of Scarcity

(Continued from page 32)

is familiar with Bakelite or Durez as a sales item or raw material, will learn about the importance of formaldehyde before this war is over.

Plenty, But Too Little

CAUSTIC soda and soda ash show how a shortage in one industry may produce scarcity in another. Both are made from common salt which is cheap and abundant. Caustic soda is the part of salt left after chlorine is separated from it. With the tremendous increase in chlorine production, there is more caustic

soda than ever. It probably runs the second largest tonnage of any chemical product. But chemical plants, aluminum mills, glass factories, paper mills want more and more soda of one type or the other. It is even possible that the use of glass as a container substitute may be cramped because of a possible shortage in soda ash.

Prospects of increased production are dim because it takes steel to build the needed facilities.

Chlorine, too, must be doled out carefully. It is used to purify drinking water, bleach paper and textiles, in laundries, for war gasses, to make chemicals

and on many other jobs. Tons will be needed in making synthetic rubber. A surplus production is not impossible because of increased production facilities and declining use by non-essential industry, but with the rubber program coming along, the likelihood of any chlorine surplus is nil.

Hunt to Find a Substitute for the Substitute:

A FEW years before the war many informed persons believed that, if war should ever come, we could depend on plastics to replace many critical items. True enough, the plastics are good substitutes—so good that the Army wants practically all of them. Not only does the Army want finished plastics, it wants to use many of the same chemicals from which plastics are made for the manufacture of ammunition.

Plastic materials are now being used for airplane gun turrets, wings, fuselages, propellers in many models; tank peep holes, machine gun cartridge boxes, gas mask lenses, insulation and upholstery on warships, quick drying paints for camouflage; to protect magnesium and aluminum from corrosion in salt air.

That is just a sample—a plastic torpedo head has been mentioned as a future possibility.

Here are some of the more common things the public must give up when plastic manufacture is diverted to war: Knobs, handles, medical apparatus (lights), radio equipment apparatus, synthetic fibers, some types of gears, electrical apparatus, decorative material in bars, show windows, etc., binding material for laminated wood, cases for scales, thermostats and other instruments.

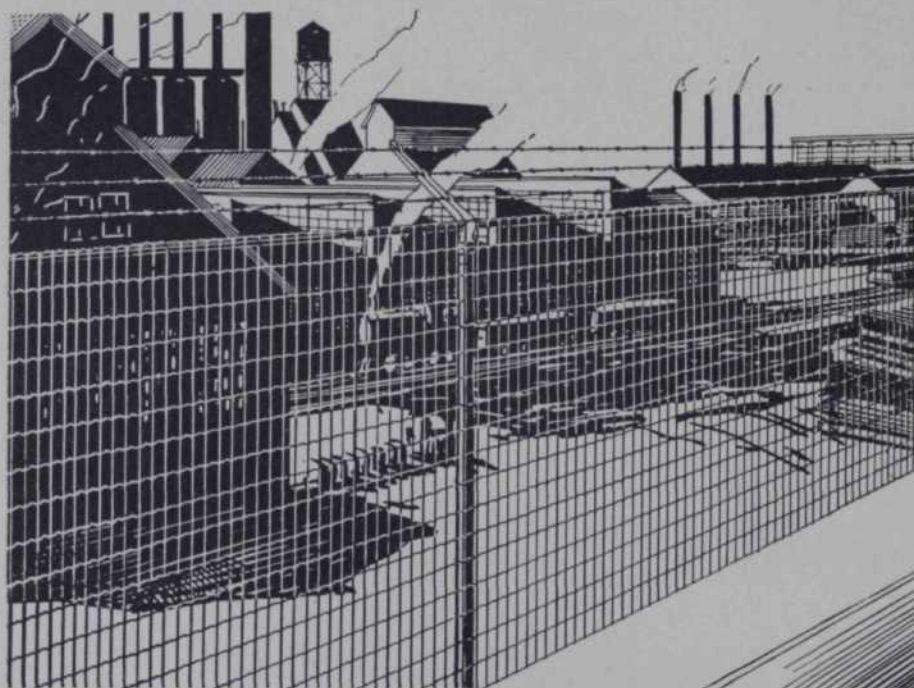
A substitute for the substitute? Many things are being tried. Wood, metal, porcelain or ceramics are in use. Electrical apparatus was equipped with porcelain for years before plastics edged in.

A wooden stopper for beer bottles and other containers that once used plastic is on trial. It is possible that we can go back 20, 30, 50 years and find that our forebears had satisfactory gadgets in those days that we can use again.

Paint and Varnish for the Duration:

PAINT makers say that, as long as we can get castor, linseed and fish oils, there are enough other ingredients to supply most any demand in the paint and varnish line. But technicians are weeping over the setback received by new techniques and new methods developed in the past few years. After making more progress in the past 15 years than had been made in the previous 50, paint makers now face the prospect of going back to old-time methods.

Paint, lacquers and varnish can still be made which will efficiently serve their purpose, but drying time and durability will be affected. A newly painted house



**"The MOST FENCE
from the LEAST STEEL!"**

Yet With **FULL PROTECTION**

The protective fence requirements of vital industry can still be maintained with *Pittsburgh Special Industrial Fence*. Pittsburgh's welded-joint construction, proved over 40 years of manufacturing, imparts to "woven wire" type fence the qualities of greater strength, rigidity, permanent mesh spacing, and smooth surface so desirable for maximum protection. Yet more miles of this essential fence can be produced per ton of steel than any other protective design!

Positive two-inch spacing of vertical wires, placed to the outside, effectively

prevents "toe-holds"; four-inch spacing of horizontal wires affords ample tensile strength; electrically welded joints cannot slip; steel-wasting, moisture-holding, insecure joint wraps or ties are eliminated. Heights 6' and 7'; No. 11 ga. premium zinc coated fabric with suitable posts, fittings and gates, available for adequately rated orders. Installation service if desired.

Write for full information.

PITTSBURGH STEEL COMPANY
1635 Grant Building Pittsburgh, Pa.

Pittsburgh Special Industrial Fences 

that once took three days to dry may now take seven. The quick drying factor will be most seriously missed in industrial finishes—extra time for drying will require more floor space.

Toluene Switches from Paint to Powder:

THIS petroleum product was formerly used almost entirely as a thinner or solvent to reduce gums and resins to a fluid state. The entire output is now used for TNT.

Two other chemicals, naphtha and xylon, were once used as a substitute. They too are powder victims.

The industry had to fall back on turpentine and petroleum (kerosene) to do the job.

What About Tung Oil?

TUNG oil was used principally for lacquers on cans. In normal times the industry used 100,000,000 pounds of tung nuts annually, but that use has gradually disappeared since China was invaded. The crop from southern states is about 5,000,000 pounds, but will probably be around 10,000,000 this year. Within ten more years it might supply most of our needs.

At present no tung oil can be used on anything but war orders.

Oiticica oil from Brazil was the first string substitute, but a crop failure eliminated it for this year at least.

Dehydrated castor oil is now the principal substitute. As long as there is shipping, castor beans will apparently come in from Brazil, but there won't be enough to take the place of all the tung, perilla and oiticica oil once used. Reported successful efforts are being made to raise a United States crop.

Fish oil is finding increasing use in paint—also for poultry and cattle food. This year's supply is impossible to estimate. The season for menhaden and sardines is later in the summer. No one knows what sort of conditions the war will bring for coastal fishing. Many menhaden and sardine boats were manned by Italians. However, the Government is encouraging production and the price ceiling is high. It is hoped that a good supply will be available for protective coatings.

Linseed oil seems plentiful despite quantities that once came from Argentina and India.

Northwest and Canadian farmers have increased flax acreage enough to prevent a shortage in the opinion of paint folks.

Shellac from India

ORIGINAL Indian shellac is still necessary for certain types of electrical insulation, but for most purposes American made shellac can and will serve present needs.

Metals for Paint

THE lead stockpile is getting bigger than necessary. Zinc is still obtainable. Titanium, which makes paint, shoe

It could have happened here



BUT IT DIDN'T!

Thanks to Cities Service Research

Enemy planes coming over . . . and thirty minutes to wait while your plane warms up! Thirty minutes! And your plane pinned to the deck like a giant eagle . . . helpless before the vultures closing in . . .

* * *

There was a time — and it was not so long ago — when this could have happened. For it actually took thirty minutes of warming up before a carrier plane could take off . . . thirty minutes of time lost and ten gallons of gasoline wasted.

Then, out of ceaseless research, came the Cities Service Immersion Heater—

a compact instrument that keeps oil at uniform temperature.

Today, equipped with these Heaters, our planes can take off almost instantly. And they are taking off — carrying the fight to the enemy on all the far-flung battlegrounds of the world!

Chalk up another smash hit for Cities Service! The same research that developed Cisco Solvent and Trojan Lubricants has scored again—this time for Uncle Sam.

In war, as in peace, the ideal of Cities Service remains the same. *Service to the Nation!*

OIL IS AMMUNITION—USE IT WISELY!



**CITIES SERVICE
OIL COMPANIES**

NEW YORK — CHICAGO — SHREVEPORT

DRIVE SERVICE

That Will Help You

KEEP

*Your Drives and Production
Rolling at Peak Efficiency*

Demand for rapid, all-out war production calls for efficient utilization of power transmission.

Slipping drives waste power, increase maintenance cost and above all reduce production. Take advantage of the knowledge and experience of your local Morse representative. He is highly skilled in power transmission engineering—can assist you in obtaining peak efficiency of all drive facilities to assure maximum production. This cooperation and service is cheerfully offered to accelerate your war production.



SILENT CHAINS

ROLLER CHAINS

FLEXIBLE COUPLINGS

CLUTCHES

MORSE *positive* DRIVES

MORSE CHAIN COMPANY ITHACA N. Y. DIVISION BORG-WARNER CORP.

FOR VICTORY



BUY UNITED STATES WAR BONDS AND STAMPS

white, soap and paper extremely white, originally came from India. But we had a two-year stock pile and a domestic mine in New York will probably supply all that is needed in the future. Chrome is not too plentiful, but neither is the situation particularly disturbing.

Paint Brushes from Wood Fiber:

THE finest brushes are still made from Chinese pig bristles or camel hair—to-day they are almost impossible to obtain. A brush that sold for \$4.50 two years ago now costs \$13.50. American hog bristles are not long and flexible enough for brushes.

The poor pig has no chance to live long enough to grow long bristles. Usable brushes are now being made from nylon and wood fibers.

But nylon and materials from which nylon is made are also needed for extensive war purposes—parachutes and explosives.

Linoleum Without Cork

A ONCE popular belief that linoleum required cork has long been disproved. It is largely a linseed oil and wood pulp product.

But the linoleum companies are heavy users of cork when they can get it. It is invaluable for insulation, stoppers and liners in metal caps. The U. S. stock is running low. Substitute wood from Brazil is being tried. The Department of Agriculture is trying to grow cork trees in California and experimenting with the bark of Douglas Fir and Southwestern trees.

How Could Lumber Run Short?

ANYONE who talked a lumber shortage two years ago would have been shot by lumber people. But this year the industry is practically on order from the armed forces to produce 39,000,000,000 feet or more than 10,000,000,000 over normal production. It will be used only for military purposes and defense housing.

A great deal will be used to erect new plants that would be built of steel under ordinary conditions.

Soft wood lumber for construction purposes was frozen last May, but lumber for boxes and even hardwoods are difficult to obtain now.

One reason was the Army's decision to build at least 1,000 truck bodies a day out of wood. The oak in two truck bodies would floor every room in a five or six room house. Other military uses for wood are cots, tent pegs and poles, furniture, beds, wooden handles for equipment, cores for rubber heels, bicycle frames, instrument boxes, stakes for tank traps, small boats, skis, crates for tanks, planes, bombs, etc., wooden pipe for culverts and an almost endless string of items.

With wood all out for war, the outlook for wooden furniture is questionable, although enough is supposedly on hand to last two or three years. The fac-

tories are converting to war industry whenever possible—many of them are fashioning plywood parts for training, cargo and miscellaneous purpose airplanes.

Labor, rubber and gasoline shortages are particularly detrimental to increased lumber production. Saw logs in the South ride out of the woods on rubber. More than 80 per cent of the cordwood used in pulp making for paper boxes is hauled from forests in a caravan requiring 90,000 tires and 7,000 trucks a year.

Loggers and lumbermen also make good soldiers, sailors and defense plant workers. They have now been classified as critical which may defer a few, but won't stop them from going to defense plants unless they are frozen on the job.

In West Coast states operators have been asked to work on Sunday and in the forests easiest to cut. The workers have been requested to forego vacations. Operators also face the problem of keeping their old machines in operation and the wear and tear on caterpillar tractors that are difficult to replace.

Carriers for War Workers:

THE problem of getting war workers to the job is serious but not impossible. In the first five months of 1942, 4,500 new busses were put on the job. Busses require precious strategical materials—steel, electrical equipment, wood, rubber, plastics. W.P.B. has allocated material for only 900 more this year, but that does not include conversions from trailers and auto carriers. There are supposedly about 40,000 busses in intercity and urban service, 18,000 in over-the-road service and 90,000 school busses. Many of the latter can be used to relieve congestion. Most sight-seeing busses have been converted. Those from Washington, D. C., are now carrying workers to a bomber plant and a government arsenal.

Chartered bus service as well as special railroad trains to race tracks will probably be discontinued before the year is over.

Transportation labor is another bottleneck. Seniority rosters on railroads are exhausted and experienced motor transport workers are in demand. New drivers recruited from delivery trucks, taxis and other laid-off industries are being recruited, but moving them from one community to another is unsatisfactory.

New York City drivers tried out in other seaboard cities haven't worked out—they never seem satisfied out of their own bailiwick.

Trucking in sections where defense industries are lacking may soon be more heavily curtailed and the trucks and drivers moved to congested areas where they are needed for the war effort.

New railroad equipment has priority, but it is far behind demand. Moving 700,000 barrels of oil a day from Gulf coast to Eastern refineries takes 800 locomotives and 20,000 tank cars and 15 days for the turn-around trip. Mr. Eastman asked for 110,000 railroad

cars, but was allotted only 18,000 up to the end of 1942. Trans-continental shipping since abandonment of the Panama Canal route has placed an additional burden on railroads, but they are still doing a good job of moving most necessary essentials.

Men's Suits

THE art of mixing textiles may become far more finely developed during the emergency than ever before. No one will say so definitely, but there seems to be an abundance of wool in warehouses.

It would be strange if ships coming back from Australia couldn't carry all the wool available but military demands

increase rapidly.

There will likely be a sharp drop in men's retail clothing stocks as soon as manufacturers start making free use of mixed yarn. Store owners will hesitate to build up big inventories of other than all-wool suits and overcoats for fear they may be caught with a large stock on hand and it is difficult to remove the popular prejudice against mixed woolsens.

If the war lasts several years the prejudice may be overcome when civilians learn that it is practically impossible to tell the difference between pure wool garments and those that have been skilfully mixed.

Experts say that durability is improved by skilful blending.



How to have QUIET EXHAUSTS on Diesel Engines



Sectional view of
Burgess STC Ex-
haust Snubber.

There was a time when Diesel engines meant loud and objectionable exhaust noise. This is no longer true. Now Diesel exhausts operate quietly in municipal power plants, industrial plants, hotels, office buildings, and hospitals, as well as on ships and in portable power plants of all types. Burgess Exhaust Snubbers make this possible.

Burgess Snubbers operate on the patented snubbing principle of quieting Diesel exhausts by removing the source of noise before the noise can occur. Removal of objectionable noise and pulsation is effected without impairing efficient operation of the engine. Burgess Battery Company, Acoustic Div., 2823-F W. Roscoe St., Chicago.



HOTEL—In Grand Forks,
N. D., the Hotel Dacotah
operates two Snubber-
equipped engines.



MUNICIPAL PLANT—
Jasper, Texas, power plant,
"deep in the heart" of
east Texas.

BURGESS DIESEL EXHAUST SNUBBERS





Those Thick-Skinned HELL BUGGIES

P & H

ALLOY ELECTRODES



Awarded the Navy "E" for excellence in war production, P & H displays it also as a pledge of the future effort.

Now, they're rolling by the thousands! And they're coming faster—thanks to mass production methods and the modern use of welding.

The development of special armor welding electrodes is one of the many ways in which P & H is serving national interests. Other P & H Alloy Electrodes and P & H-Hansen Welders are used in shipyards, aircraft plants, and hundreds of other vital industries.

General Offices and Factory:

4430 W. National Avenue, Milwaukee, Wisconsin

HARNISCHFEGER CORPORATION

WELDING ELECTRODES • MOTORS • HOISTS • P & H • ELECTRIC CRANES • RAC WELDERS • EXCAVATORS

FOR VICTORY



BUY UNITED STATES WAR BONDS AND STAMPS

Dear Mr. Business Man:

(Continued from page 18)

drawing war wages will not compete against their neighbors in buying.

We have gone overboard, so to speak, in the conversion of industry to war production and the consequent neglect of production for civilian needs. This was natural. It is an emotional cycle through which a nation, under the circumstances, passes. And war production must come first on that point, all are agreed.

There is the problem of balancing conversion with the domestic economy. It is a problem that can't be worked out in a state of agitation.

Concerning the tax bill, those of us who are charged with formulating it are working on two premises:

The first premise is that we must raise just as much revenue as we can with a view to paying off the war expenditures. Just how far we are going in that respect may be gleaned from the fact that the war expenditures for the fiscal year beginning July 1 are expected to be above \$70,000,000,000. The tax bill will raise some \$25,000,000,000 or so. So we will not be doing so well on the score of paying as we go.

The second premise is that the bill must retard inflation. Frankly, I don't see much hope of its having any real influence in that respect. I repeat that I think the greatest single deterrent against inflation is production—production of civilian goods. And the encouragement of production of civilian goods is not a tax matter. It is a matter of priorities, a matter of an attitude of thinking on the part of the war managers.

Boiled right down, then, it is not correct to say that the problems of business men center wholly around the tax bill. We all have a job to do. Industry is doing its part in awe-inspiring degree. So is labor. These two forces should keep a mutual watch on the outposts of private enterprise. Don't let them be captured by the enemy!

No more Trade Secrets

EVERY oldster remembers the time, not so many years ago, when industrial plants were guarded from curious visitors like the rock of Alcatraz, lest a competitor learn something about a secret process. That custom was passing even before the war, but now it is gone, perhaps forever. "Secret process" today means secret to the enemy nations, not secret to the competitors of the industry using it.

Over in St. Louis, a production Advisory Committee of munitions makers meets every Monday evening at the Office of the St. Louis Ordnance District. Competitors sit down around a table and swap ideas, tools, materials, formulas—one for all and all for Victory.

Strength from War's Crucible

(Continued from page 23)

vance. There will be a tremendous accumulation of deferred purchases of both capital goods and consumers' durable articles. In view of the present severe restrictions and stoppages of supplies of automobiles, electrical appliances, household articles, residential building, and non-military industrial equipment, as well as the product improvements that will have resulted from technological advances in the meanwhile, this backlog may well be substantial.

To purchase these goods, on the other hand, consumers will have accumulated more savings than ever before in history.

More purchasing power

THE corollary of large-scale purchases of War Bonds, priorities, rationing, and dwindling supplies of consumer goods in the face of full pay envelopes during the war is the creation of a rising tide of stored-up buying power, to pour into the markets once barriers are lifted and supplies are again available.

More important, if international trade is to be placed on a more rational, less uneconomic, less nationalistic basis after this war—which the democracies maintain as one of their post-war aims—the effects on this country in particular will be far reaching. Those who consider the world economy, together with our domestic markets, in static, fixed terms regard the rapid industrialization of Canada, India, Australia, and parts of South America, now being advanced by the war, as an extremely threatening trend, promising new sources of competition abroad, narrowing our future markets in international trade.

But, if the foreign markets are viewed in terms of unlimited expansibility, the current acceleration of industry in many areas is encouraging. Fortunately, the record of history is in the latter direction. Our best foreign markets in peace times have been those areas—Great Britain, Germany, Belgium, and others—most advanced industrially. The smallest outlets for our products have been in the extremely populated but most undeveloped, least competitive areas of China, India, and Africa.

Abroad, as at home, a skilled, efficient worker is the best market for the goods of industry.

Business proves its worth

FINALLY, this war provides American industry and commerce, banking and finance, with opportunity to prove again their distinctive worth and serviceability in the national interest. For nearly a decade, business was punished for its alleged wrong-doings of earlier years. Almost overnight, however, with the outbreak of the war, the nation turned to its factories, mines, banks, railroads,

airlines, and every other section of its business community for the supplying of record-breaking volumes of war goods and services.

The accomplishments of American industry in response to this emergency have been outstanding—it is no mere rhetoric to say that the "battle of production" has been won.

When the nation's industrial equipment, management, and financial system produce a victorious war machine, and the people are made aware of the fact that our economic order, as well as

the armed forces and the Government, played a determining role in winning the war, an enduring understanding of our capitalist, enterprise system may result.

This same American enterprise system, now performing miracles of organization, production, and supply for war, will one day turn its attention to furnishing employment and opportunity, goods and services, for a post-war world in which its democratic ideals and liberties will have proven superior to totalitarian dictates and regimentation.

These promises, others in evidence, and the many encouraging trends that can yet be outlined only in rough detail, provide a background for an era of reconstruction, progress, and economic advance fulfilling the broadest definitions of national destiny.



BUTLER

READY-MADE STEEL BUILDINGS

AT THIS ONE MINE— THEY SERVE 11 PURPOSES!

Factory fabricated for speedy, bolt-together erection. This characteristic of Butler Steel Buildings is now of prime importance throughout industry. Particularly is this so in the No. 1 war industry—mining, where swift expansion of facilities is needed to produce the gigantic increased tonnages of raw materials vital for victory.

Next in importance is adaptability. At the Evergreen Mine pictured here 11 operations are housed in Butler Steel Buildings ranging from fan rooms to locomotive round house in the top picture—and from ore bin, conveyor boot to washing plant shown at left. Structurally strong, fire-safe Butler Steel Buildings serve permanently or they are quickly enlarged, taken down and re-erected with full salvage.

For over 30 years Butler Steel Buildings have served a score of industries. Before you build any structure, particularly any rated essential to prosecution of the war, figure with Butler engineers. There are 3 helpful Butler Steel Building books.

For prompt handling, address all inquiries to:
1240 Eastern Ave., Kansas City, Mo., or
940 Sixth Ave., S. E., Minneapolis, Minn.

Other Sales Offices: Washington, New York, Chicago, Atlanta, Shreveport, Houston. Representatives in other principal cities.



BUTLER MANUFACTURING COMPANY

FACTORIES

KANSAS CITY, MO. . . . GALESBURG, ILL. . . . MINNEAPOLIS, MINN.

PRINCESS MARY WHITE



SHE'S just seven years old, she lives at 514 Plum Street, her father is plain Bill White. Most people notice her pigtails and her blue eyes, but they never guess they're in the presence of royalty.

But we know!

Maybe that's because we know more about her kingdom—the kingdom she'll be queen of one day—than these people. It's no ordinary kingdom, this—it combines the best features of all the fairy stories you ever read rolled into one. Instead of an ordinary marble palace, she'll have a real home made of inexpensive materials that you haven't even heard of yet, flooded with sunlight, and opening on the whole outdoors.

Instead of a pumpkin coach, she'll drive a car such as you have never dreamed of, and fly a plane as readily as you would drive a car. Plastic shoes will be her glass slippers. And her servants will all be electric, for electricity in modern electric appliances for cooking, heating, cooling, and cleaning, is just about the best servant man has ever had.

Where is this fairyland? It's right here in America, tomorrow!

But how can we be sure that this is not just another fairy tale? Because American industry has already made enough discoveries and developments to reveal to us the shape of things to come. New materials like plastics, new developments like television, new sciences like electronics, assure us of this—and promise even more.

Today's job is fighting for that better world. But when tomorrow comes, American industry, once again busy producing things to make living better, will help to make tomorrow's young men and women more truly princes and princesses than the heroes of yesterday's fairy tales. *General Electric Company, Schenectady, N. Y.*

☆☆☆

The volume of General Electric war production is so high and the degree of secrecy required is so great that we cannot tell you about it now. When it can be told we believe that the story of industry's developments during the war years will make one of the most fascinating chapters in the history of industrial progress.

GENERAL  ELECTRIC
952-336M1-211

Index of ADVERTISERS

August • 1942

Aetna Fire Group.....	67
Aluminum Company of America.....	57
American Air Filter Company.....	61
American Industries Salvage Committee 74, 75	
American Telephone & Telegraph Company.....	2nd Cover
Association of American Railroads.....	16
Better Vision Institute, Inc.....	83
Burgess Battery Company.....	89
Burroughs Adding Machine Company.....	73
Butler Manufacturing Company.....	91
Calvert Distillers Corporation.....	51
Carlton Hotel.....	80
Cast Iron Pipe Research Association.....	9
Chase National Bank.....	94
Chesapeake & Ohio Railway Company.....	69
Cities Service Oil Companies.....	87
Cutler-Hammer, Inc.....	71
Cyclone Fence Company.....	78
Dennison Manufacturing Company.....	58
Electro Metallurgical Company.....	42
Erie Railroad System.....	8
Ethyl Corporation.....	3
Fairbanks, Morse & Company.....	2
Felt & Tarrant Mfg. Company.....	47
Ferguson Company, The H. K.....	77
Fleur-O-Lier Manufacturers.....	81
General Electric Company.....	12, 92
General Foods Corporation.....	80
General Tire & Rubber Company.....	64, 65
Goodrich Company, The B. F.....	1
Goodyear Tire & Rubber Company.....	14
Harnischfeger Corporation.....	90
International Harvester Company...3rd Cover	
International Salt Company.....	63
Jennison-Wright Corporation.....	13
Kimberly-Clark Corporation.....	41, 85
Libbey-Owens-Ford Glass Company.....	55
Marchant Calculating Machine Co.....	68
Martin Company, The Glenn L.....Back Cover	
Metropolitan Life Insurance Company.....	45
Morse Chain Company.....	88
Morton Salt Company.....	11
Norfolk & Western Railway Company.....	7
Northern Pacific Railroad.....	79
Owens-Illinois Glass Company.....	4
Pittsburgh Steel Company.....	86
Pullman Company, The.....	53
Sherry-Netherland Hotel.....	84
Union Carbide and Carbon Corporation.....	42
Union Pacific Railroad.....	72
Western Electric Company.....	49
Westinghouse Electric & Manufacturing Company.....	10
York Ice Machinery Corporation.....	6

"... Plainly Visible to the Shopper"

(Continued from page 34)

customer on a given date for any article, during March or whenever the last sale was made. It seems to me that I would have to do that anyway if I needed to prove that my March prices aren't fictitious. The irony of it all is, no matter what price I make, I can't get materials to sell.

Which seems to make a point: The innkeeper without records could not make up a price list that amounted to anything; the building material retailer could satisfy any curious customer by turning back to sales slips.

The fact that buyers are not asking to see the March price lists before they buy is proof of the regard in which the people of most communities hold their storekeepers. The law says that "No person shall buy or receive any commodity or service at a price higher than the maximum price permitted by this regulation." Could our government need any better proof of the small business man's trustworthiness?

Even more regulations

THE merchants fear, too, that this price ceiling and priority business may not be the end of the regulations and the reports. They anticipate inventory regulation and an attempt to standardize all commodities.

Meanwhile priorities are adding their twinges to retail headaches. In this field, the delays and uncertainties are maddening and the difficulty of learning what one is allowed to do keeps the retailer constantly on the hot seat.

Generally speaking, priorities must originate with the user of materials. To all practical purposes, priority rulings as they apply to the retailer of strategic materials are intended to allow necessary replacements and repairs and to provide new equipment to take care of bare necessities but to deny anybody the right to improve or extend their present facilities. Dealers will cooperate heartily in enforcing the spirit of these restrictions. But why wrap the whole regulation in so many contradictions and technicalities that nobody knows where he stands?

For instance, a householder requiring a plumber to use \$6 worth of material and \$5 worth of labor to repair a broken water line must sign a statement that the material used on this job was necessary for maintenance and repair of his water system. The dealer in turn, when he orders this \$6 worth of material from his jobber, must sign a statement that he is using it for maintenance and repair.

There is a possibility that plumbing establishments may be required to show customers' priority statements to back up every item bought from jobbers.

Gas ranges are frozen in an appliance dealer's stock. New gas pipe can be used only for necessary repairs. About two months ago an appliance dealer had an order for a gas range from a newly mar-

ried couple who were furnishing a house. The dealer struggled through his war regulation bulletins (supplied by his trade association and not by any government agency) until he found that, to sell this customer, he must have a statement signed by him on Form PD-1A, available from the War Production Board, Washington.

Accordingly, he wrote for forms. Two months later, he has had no reply. In the meantime, the rules have changed so that Form PD-1A is not needed after all. All that is necessary now is to have his customer sign a statement (if he has not starved to death in the meantime) setting forth the fact that he has no other means of cooking and, therefore, requires the stove. But technically speaking, the dealer cannot find a place in the regulations permitting him to use a foot of pipe or a single fitting to connect a new stove to the gas mains.

In the farm equipment field the price ceilings are such that the dealer can, by using the maximum prices, make more money than he has ever made. . . . If he can get the goods to sell. Ceiling prices for delivery of new machines are manufacturers' list prices plus freight, plus an allowance for assembling and servicing.

The priorities situation is taken care of at the source of supply. The manufacturers are allowed to make a definite number of machines which are allocated to the various wholesale centers on a basis of past sales. Then, each dealer gets them if and as they are available. And, when he does receive machines he is expected to put them where they are most needed in his trade territory.

Two standards for customers

NOW, much of the farm equipment is sold by dealers who also sell hardware. Therefore, the dealer may sell the same farmer a cream separator and a coal range. On the cream separator he is allowed to use his own discretion as to whether or not the farmer needs the machine. But, when he takes the order for the range, he must get the farmer's statement that he has no other means of cooking food.

Does the honest merchant who sells the cream separator suddenly become a shady character when he starts dealing in ranges?

But the implement dealers have not escaped. Binder twine has turned, for them, into red tape! Every farmer who buys twine must sign a priority statement "that the twine being purchased will be used only for harvesting a crop or sewing up grain bags." And, nobody has been able to find out how to price twine. The harvest has practically ended and to date queries on the correct method of pricing twine are still unanswered by O.P.A.

Lack of instructions from the O.P.A. and the W.P.B. as to what the regulations actually are has caused much dissatisfaction among small retailers.

Practically the only source of reliable information has been the business associations and faithful reporting by the trade press. Secretaries of associations and their legal departments have decoded the official bulletins, put the rulings into understandable language and distributed their best interpretations of each new edict. Without their services most dealers would be completely in the dark as to what is expected of them.

Secretaries of associations serving thousands of small retailers know that their members are fully in sympathy with the purpose of the price regulation and the plan to divert to war production all material except the minimum required for the bare necessities of civilian life. Practically all of the letters they have received from their members say, in effect:

We don't want profits. We want to win this war. Help us to get the Government to tell us what they want, then give us a chance to go to town.

Changeable regulations

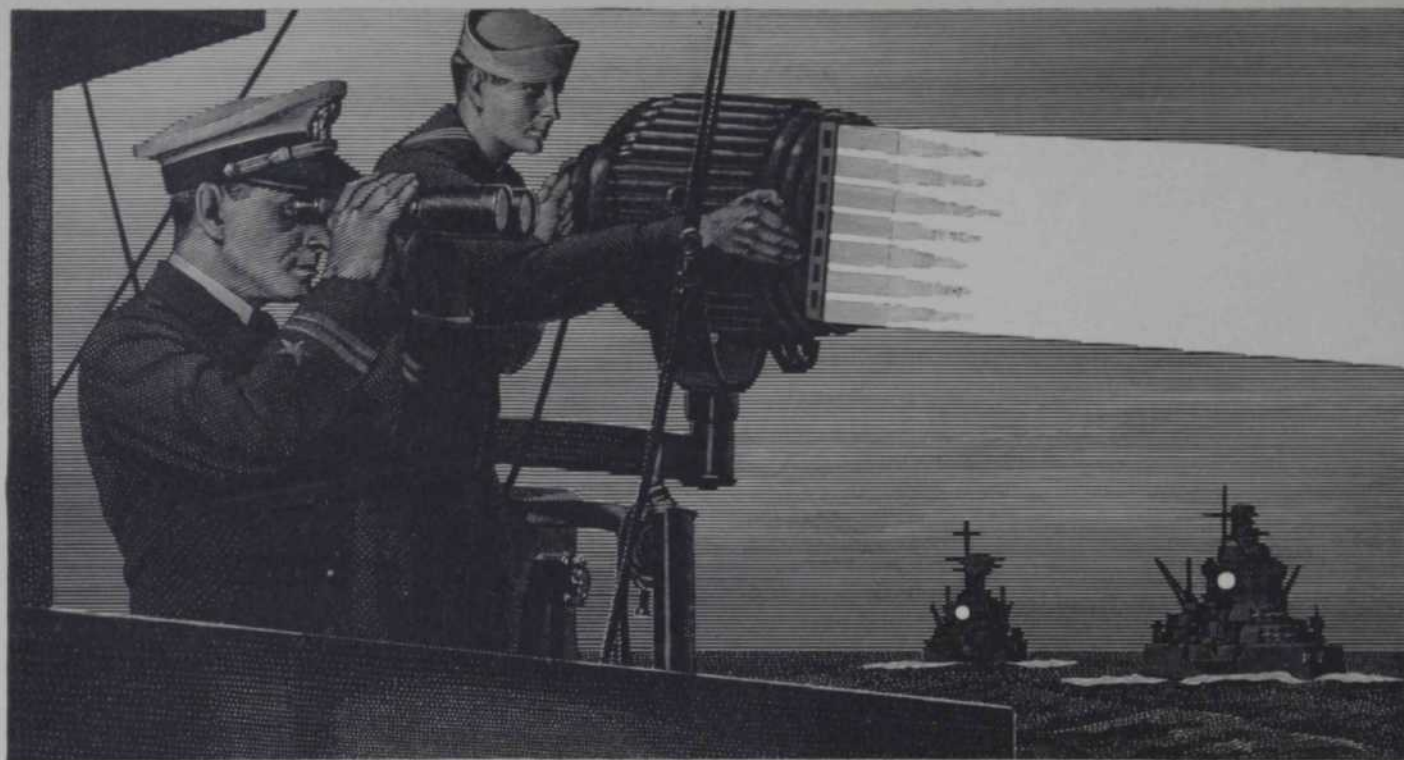
IN RESPECT to the dissemination of information to retailers much well intentioned advice was offered by sales representatives of manufacturers and wholesalers. One stove manufacturer started out with enthusiasm to keep his dealers completely informed on the regulations as they affected the stove business. At first he did a masterful job. Then he reached the place where he was writing two or three letters a week, each one contradicting what he had written before. Finally he was prefacing every other paragraph with the phrase, "I am also told that. . . ." At length he gave it up altogether and left his customers to their fate.

Small business people don't like the threat that is implied in the phrasing of the regulations, the stressing of penalties for failure to meet the rules. In general they have a great respect for the law and they want to stay that way.

They resent being threatened when they are so eager to cooperate if they can only find out exactly what is required of them. This uncertainty, this constant dread that they may be violating some rule, this ever present suspicion that any stranger who comes into their store may be there to catch them breaking the law is developing into a fear psychosis that adds nothing to efficiency or morale. They are willing to have real chiselers dealt with severely, but do not like being indicted before they have been given a chance to do their part.

The small business men of America are loyal. They have a huge investment in the present welfare of this country and a larger stake in its future. The Government does not hesitate to ask them to assume a partnership in the paying of taxes, in the buying of bonds, in the support of local institutions which form the basis of Democracy. Now, in this crisis, they are asking a full partnership.

If someone will tell them what is wanted they can be a real help in getting it done. The small retailer who has survived against all odds is an ally worth taking into full partnership.



Blinkers in the Night

Call Crews to Battle Stations

Guarded messages from ship to ship marshal the naval task unit for smashing attack against an enemy base. Signals of a different kind enable business men to increase the striking power of America's fighting forces, by speeding the completion of war orders.

Larger inventories, larger payrolls, slower turn-over are signs which may forecast an expanding need for credit in businesses engaged on prime contract or

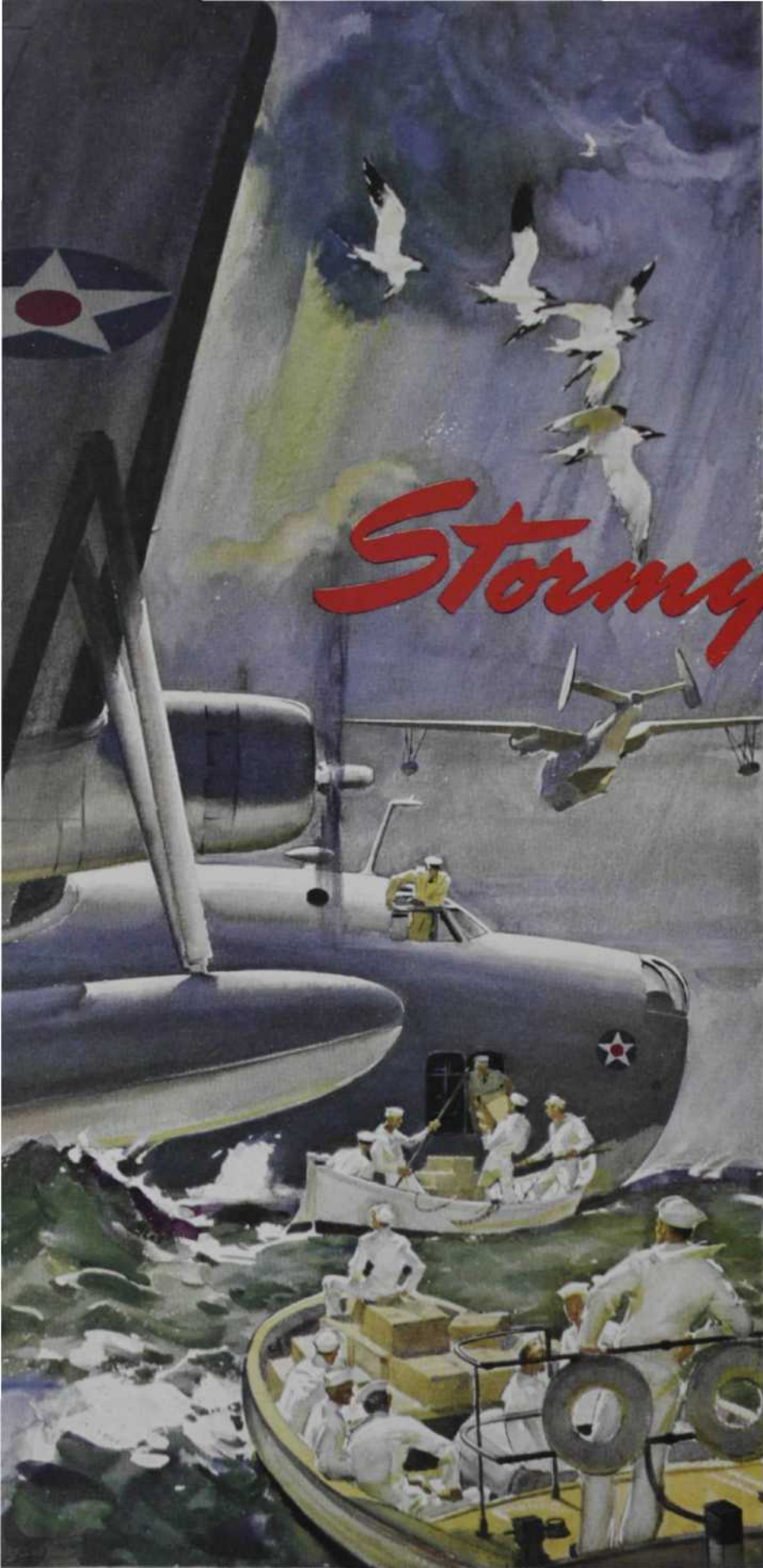
subcontract orders. Fortunately, this war finds America armed with ample credit resources, available at low cost to sound enterprise.

The Chase seeks every opportunity to cooperate with American industry to meet its heavy credit requirements in time of war. Our facilities are available directly to corporations in Greater New York, and through our correspondent local banks in all other parts of the United States.

THE CHASE NATIONAL BANK

OF THE CITY OF NEW YORK

Member Federal Deposit Insurance Corporation



Tomorrow, romance moves next door. Giant 100-ton airliners, heavily laden with passengers, mail and freight, will bring Capetown, South Africa, over 6,600 air miles away, within 24 hours of Miami. Great technical progress, born of war, makes such aircraft an inevitable reality.



Riddled With Bullets, no gasoline escapes the Martin Mareng self-sealing fuel tank—America's first response to General Arnold's demand for bullet-proof fuel tanks in 1940. Today Mareng self-sealing tanks are standard equipment on many American military aircraft.

Stormy Petrels U.S.N.

STORMY petrels . . . far flying sea birds . . . harbingers of trouble . . . so, too, are the Navy's over-ocean patrols. Both men and planes must stand up to tropic heat and arctic gales, must endure hours of vigil over ocean wastes, must have what it takes for swift, effective action against enemy aircraft, surface ships and submarines.

The men of the U. S. Navy have shown themselves more than equal to this task. And their Martin "Mariner" patrol bombers have proved worthy of the men who fly them. Great, long-range flying boats, with destructive bombload and fierce firepower . . . able to take the best that the Axis and the oceans have to offer!

Behind today's terse communiques the outlines of a grim, ceaseless struggle are visible. In this struggle American men and materiel are demonstrating the high qualities that lead inevitably to Victory.

THE GLENN L. MARTIN COMPANY
Baltimore, Maryland
U. S. A.

Martin AIRCRAFT

Builders of Dependable  Aircraft Since 1909